Food Packer

The National Magazine of Production and Management

CANNING GLASSPACKING FREEZING

A Vance PUBLICATION

April, 1956

Man-of-the-Month
F. Gilbert Lamb

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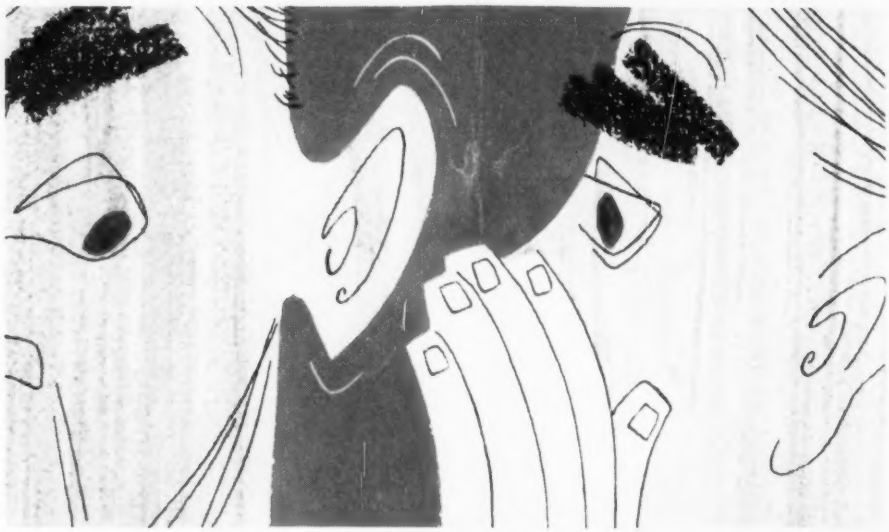
IT'S NO SECRET!

In fact, it's easy to get uniform flavor for less money!



Morton can help you improve flavor control with better salt, better salting methods

To insure better, more uniform flavor and quality in processed foods, canners, packers, and processors use Morton '999' Salt.

For Morton '999' is a low-cost, high purity salt . . . free from bitter calcium and magnesium compounds that can spoil flavor. '999' is always 99.9% clean, pure sodium chloride; exceptionally low in the objectionable trace metals, copper and iron.

High purity Morton '999' Salt:

- gives a milder, more uniform salt flavor to prepared and canned meats . . . reduces "spot" color defects due to salt impurities.
- minimizes the "toughening" effect on peas, corn and beans of all kinds, due to calcium impurities in common salt . . . gives pure, clear brine for olive and pickle packs.
- requires 33% less storage space (due to its compactness) than the same amount of flake salt.
- does not contain insolubles and impurities found in Rock Salt.

For more information about Morton '999' Salt, the Morton Model-E Brinemaker, or the Bulk Salter, write:

Morton offers accurate salting methods to save time and money

The Morton Model-E Brinemaker is specially designed to produce up to 800 gals. of brine per hour from readily-available '999' Salt. No space-wasting storage tank is needed, and high-purity '999' Salt means no shut-downs for cleaning out sludge or impurities.

48" high, 36" diam. (not available on West Coast)

The Bulk Salter Machine dispenses '999' direct to can lines. The Bulk Salter accurately salts up to 400 cans per minute—if no can is present, no salt is released. Will dispense '999' Salt and spices, M.S.G., etc. Machine can be filled and supervised by unskilled labor.

40" high at tallest setting

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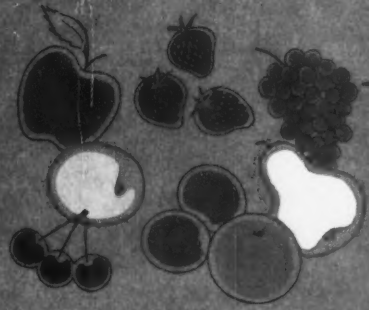
HEEKIN

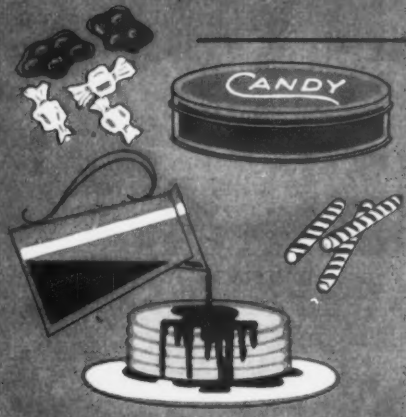
Product Plans

Your Cans

Plain or Lithographed



with more than 55 years of Experience and Scientific Planning



HEEKIN CANS

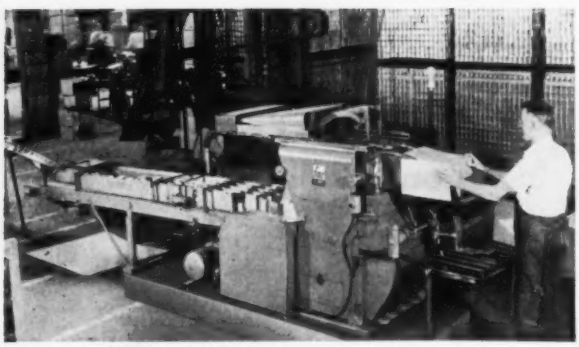
PRODUCT PLANNED

since 1901

THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS*
SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS

DOES YOUR PACK SUFFER *Bowling Ball Impact?*

Time to replace with a New Improved FMC NON-SHOCK CASER —so *Smooth and Gentle* to Cans and Contents



FMC's NON-SHOCK CASER "babies" cans into cases at a fast clip, limited only by the speed of the operator.

—even at speeds up to 1200 cases per hour!

Old methods of casing no longer meet the requirements of spoilage-free, high-speed operations—especially where loosening can seams of high-vacuum packs is a problem. The new Model 3 FMC Non-Shock Caser, with all its exclusive features for big capacity and gentle handling, really "delivers the goods" to the case completely free of damaging impact to cans, labels or product. Compact and flexible, machines are built to handle specific can sizes and certain combinations from 202 x 308 packed 6 x 8, to 603 x 700 packed 2 x 3.

Remember: There are extra dividends when you care for your cans all the way to the case—with an FMC *Non-Shock* Caser!

NO ROLLING—NO NEAR SEAM IMPACT
Cans enter the machine *upright*, move smoothly along woven wire belt, are transferred gently to the case.

NO CAN ELEVATOR REQUIRED
Cans are delivered to the continuous feed belt through a 90° twister, avoiding the seam-splitting action of steep gravity-roll contact.

FREE BULLETIN AVAILABLE
Fully illustrated Non-Shock Caser bulletin is yours for the asking. Better yet, call your FMC representative today for complete information!

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

Food Packer

April 1956

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Events To Come

April 6. National Pickle Packers Association, spring meeting, Drake Hotel, Chicago.

April 9-12. National Packaging Exposition, silver anniversary, Convention Hall, Atlantic City, N. J.

April 10. Ohio Canners Association, Inc., annual spring meeting, Niel House, Columbus, Ohio.

April 16. Conference on Problems of Extraneous Matter in Foods, Syracuse University, Syracuse, N. Y.

May 11-12. Pennsylvania Canners Sales Clinic, Pocono Manor, Pa.

May 16-20. National Materials Handling Exposition, Amphitheatre, Chicago.

May 18-19. Board of Directors meeting, National Canners Association, Statler Hotel, Washington, D. C.

June 10. National Nargus Convention, Los Angeles.

June 24-30. National Food & Drug Act, anniversary week, Washington, D. C.

July 10-12. Western Packaging & Material Handling Exhibit. Pan Pacific Auditorium, Los Angeles.

Oct. 11-13. Southern Frozen Food Convention. Dinkler-Plaza Hotel, Atlanta.

Front Cover

The modern age demands that modern, scientific ideas be employed to render better products in processed and manufactured form. Our cover picture shows laboratory experts, Dr. W. A. Gould, *Food Packer's* quality control editor, and Ed Starr, Stokely-Van Camp quality control director, inspecting tomatoes with a Macbeth Executive colorimeter.

ONE

SHORT CONFERENCE

One short conference
will reveal more than thousands
of printed words about
Crown Cans and Crown Services to
Canners. Among the services
we are prepared to
offer and which may
contribute substantially to your sales
and profit picture are:
Laboratory and Field Research,
New Product Evaluation and Development,
Plant Layout, Closing Machine Maintenance,
Marketing and Merchandising Counsel,
Package Design and Art,
and "new-look" Lithography.
Let's sit down and talk it over.

CROWN

CROWN CORK & SEAL COMPANY, INC.

"Big Enough to Serve You . . . Small Enough to Know You"

PHILADELPHIA • CHICAGO • ORLANDO • BARTOW • BIRMINGHAM
BALTIMORE • NEW YORK • BOSTON • ST. LOUIS • SAN FRANCISCO

How to get BIGGER RETURNS on your crop investment

Peaches

"Fine all-around color" —Illinois.

Frank Rosson, right, shows some of his prize Elberta peaches to Mathew Zilinskas, ORTHO Fieldman. Rosson changed from sulfur sprays to a full ORTHO program featuring ORTHOCIDE (captan) in 1954 on his 125 acres of Elberta peaches. Result: far richer green foliage earlier in the season. And his peaches had a fine *all-around* color, were firmer and more uniform. Mr. Rosson is convinced the ORTHOCIDE spray from beginning to end of season is the best program he could use on his fruit. *Makanda, Illinois.*

Strawberries

"Very little loss from rot" —New York.

"We are very satisfied with the ORTHOCIDE program on our 40 acres of strawberries, which yielded 235,000 quarts of finished fruit. We had very little loss from rot. At the peak of harvest we stored berries we couldn't process in coolers. When they were taken out they showed very little signs of mold as compared with berries not treated with ORTHOCIDE. In fact, we had such good results with ORTHOCIDE that we used it on 40 acres of tomatoes, too." Picture shows Frank Notaro, right, and his farm manager, Thomas P. Mecca, inspecting ORTHOCIDE-treated strawberries. *North Collins, New York.*

Get extra dividends with ORTHOCIDE (captan) in a complete ORTHO program.

Only ORTHOCIDE, a top quality formulation of the chemical, captan, provides: 1) Exceptionally fine particle size. 2) Better sticking, wetting and spreading agents. 3) Superior carrying agents. 4) Compatibility with the full ORTHO line of insect and disease control products. For best results follow the advice of your ORTHO Fieldman.

ORTHO
SCIENTIFIC PEST CONTROL
REG. U.S. PAT. OFF.

ON ALL CHEMICALS, READ DIRECTIONS AND CAUTIONS BEFORE USE

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CALIFORNIA SPRAY-CHEMICAL Corp.
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Using Salt Efficiently

by **INTERNATIONAL SALT COMPANY, INC.**—America's largest producer of salt

Unloading Bulk Salt From Boxcars—at Lower Cost

While salt is a relatively low-cost material, handling it often involves considerable expense in time and manpower. Unloading bulk salt from boxcars, for example, has always been one of the problem spots. Today, however, a number of money-saving unloading methods have been developed for large and small plants.

Determining which of these modern salt unloading methods is best for your company depends on the tonnage involved, and specific plant requirements. But you can generally find one which will pay for itself—in savings on time and labor—over a relatively short period. Here is a review of four practical salt unloading methods, and the equipment used in each.

Portable conveyor system. This is the simplest improvement over straight manpower. A power-operated belt conveyor of suitable length is placed inside the car door, and salt is then shoveled onto it. Conveyors may be used to bring salt directly into the plant—or even to storage areas above dock level. A good conveyor for most needs is generally about 16 to 18 feet long and capable of moving salt up a 30° slope. With a conveyor, a good deal of manpower in shoveling is required, but one 40-ton car can be unloaded in about 12 to 14 man-hours—a 19% saving in time over straight manpower.

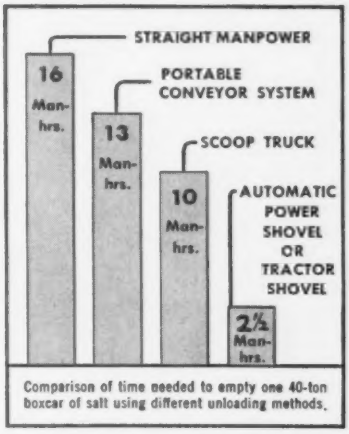
Scoop truck and conveyor. A scoop truck is simply an enlarged scoop shovel with two small wheels at the bowl of the scoop. Whereas a shovel holds only about 20 lb. of salt—a scoop truck holds 100 to 150 lb. In operation, the scoop is pushed into the salt, tilted up, and then wheeled to the conveyor at the car door. With just one of these scoops, a worker can unload 40 tons of salt in 10 hours—and once the job is under way, there is room for two or three more men with scoops. An important point: A good scoop truck costs only about $50.

Automatic power shoveling. This is one of today's most popular methods for unloading bulk salt—and many manufacturers offer excellent power-shovel equipment. Basically, the device consists of a large power-operated scraper blade mounted on a cable. The scraper is moved toward the end of the car, and as soon as this motion stops, a power winch takes hold to drag the scraper toward the car door. Salt is pushed out through the door by the scraper. One man can unload a 40-ton car in 2 or 3 hours by this unique method. Both winch and motor for the power shovel must be permanently mounted on the dock or side of the building—but the installed cost of this equipment is moderate.

Small gasoline or electric tractor shovel, somewhat similar to a fork-lift truck, but with a scoop mounted in place of the forks. Many types are available, some having forks interchangeable with the scoop. One man on this type of truck can empty a 40-ton car in 2 to 3 hours—the equivalent of

power-shovel unloading. The higher cost of a tractor shovel, however, is often justified when it can be made available for other purposes.

Extra savings are possible with tractor shovels with scoop attachments. These



Comparison of time needed to empty one 40-ton boxcar of salt using different unloading methods.

trucks not only move salt out of the boxcar, but also transport it to any point of storage or use within the plant. This eliminates the need for various types of conveying equipment—either on the dock or in the plant. And manpower for handling salt in the plant is considerably reduced.

TECHNICAL SERVICE WITH YOUR SALT

Through skilled and experienced "Salt Specialists," International can help you get greater efficiency and economy from the salt you use. International produces both Sterling Evaporated and Sterling Rock Salt in all grades. And we also make automatic dissolvers in metal or plastic for both types of salt. So we have no reason to recommend one type of salt over another; we simply suggest the type and grade of salt most perfectly suited to your needs.

If you'd like help on any problem concerning salt or brine—or further information on salt unloading—contact your nearest International sales office.

International Salt Company, Scranton, Penna.
Sales offices: Atlanta, Chicago, New Orleans, Baltimore, Boston, Detroit, St. Louis, Newark, Buffalo, New York, Cincinnati, Cleveland, Philadelphia, Pittsburgh, Richmond.

FOR INDUSTRY, FARM, AND THE HOME—
STERLING SALT
PRODUCT OF INTERNATIONAL SALT CO., INC.

Du Pont's new non-caloric sweetener

Cylan

TRADE-MARK

CALCIUM CYCLAMATE

makes dietetic foods more delightful!

Yes, dietetic foods sweetened with "Cylan" are more delightful! That's because "Cylan" has the pleasant, sweet taste your customers like . . . but without the calories. "Cylan" remains stable and retains its sweetening through canning, baking, and freezing. It's unaffected by fruit acids, too.

And, because of modern eating habits, "Cylan" opens new markets for you. New markets because over 20% of our population is overweight. These "weight watchers" are all potential customers for your low-calorie products sweetened with "Cylan."

Capitalize on this growing, profitable market!

• *Write Du Pont for free sample and informative booklet today.*
E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Dept., Wilmington 98, Delaware.

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TRADE-MARK
CALCIUM CYCLAMATE

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

1901

Missing in the turn-of-the-century home, along with the electrical appliances of today, were the cleaning agents, polishes and other household products that have reached the market in the past 50 years. House cleaning was a time consuming chore—the familiar bottle of ammonia, the only available cleaning aid.

The modern homemaker chooses from an endless variety of household products, each designed for a specific task . . . the majority packaged in handy and economical glass. Metro is supplying a steadily increasing number of these glass containers . . . offering METROmatic service as assurance of quality glass products, delivered on an unfailing schedule, geared to specific production requirements.

METRO GLASS COMPANY, INC.

MANUFACTURERS OF QUALITY GLASS CONTAINERS

JERSEY CITY, NEW JERSEY

WASHINGTON, PA. CHICAGO, ILL.

HOW'S YOUR CANNING I.Q.?

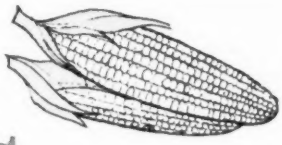
Do you know that...

Peas

have tender skins, and contain pectins? When a salt having more than 150 parts of calcium and magnesium per million parts of salt is added to peas, it toughens their tender skins, and down-grades their quality.

Beets

contain oxalate? When calcium and magnesium impurities exist in a salt, they react with the oxalate to form calcium and magnesium oxalate. This is left as an unattractive, white deposit on the beets.



Corn

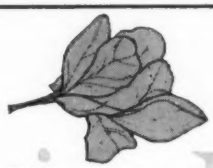
is high in sulphur? Copper and iron impurities in a salt react to give corn an unsightly dark brown or black color. These impurities also react with vegetable fats to cause rancidity and off-flavor.

Olives

contain olive oil and tannins? When excessive calcium is present in a salt, calcium oleate, a soapy, white deposit is formed. The tannins combine with the calcium to create a dark-colored brine.

Beans

like peas, contain pectins? They taste best when tender. But when calcium and magnesium impurities exist in a salt, the bean skins harden. Result? Choice-quality beans are down-graded one or more grades.



Spinach

contains oxalate? When calcium and magnesium impurities are present in a salt, an unappetizing white substance forms on the spinach. The result is decreased customer satisfaction, and down-grading.

So why let impure salt down-grade the legumes you pack?

Use Diamond Crystal Flake Salt...it will help you get highest quality and profits from your product!

- **Diamond Crystal Flake Salt is low in calcium and magnesium impurities**—its higher uniform purity produces a true salt flavor that enhances the natural flavor of raw vegetables!
- **Diamond Crystal Flake Salt is low in heavy metal contamination**—has less than 1.5 parts per million of pro-oxidants copper and iron!
- **Diamond Crystal Flake Salt is highest in cleanliness**—has the lowest insoluble content of any canning salt. It's the cleanest ingredient you can buy!

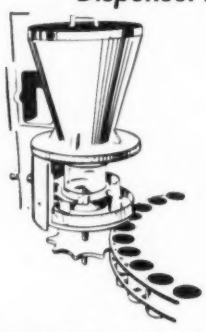
Start using Diamond Crystal Flake Salt in your operation right away! Available in a variety of screenings.

DIAMOND CRYSTAL FLAKE SALT

America's Largest-Selling High-Grade Salt!

For further information, write to:
Canning Dept., Diamond Crystal Salt Co., St. Clair, Michigan

NEW! *Diamond Precision Dispenser!*



This accurate, new automatic salt dispenser is an engineering triumph. It deposits just the right amount of salt in each can *every time*. Never misses! Eliminates tablet burns, too! Send for full information today!

Industry | Names and News

R. P. White

D. R. Holcombe

Robert P. White has been elected vice president in charge of sales for the *White Cap Company*, Chicago.

Dewey R. Holcombe has been appointed manager of the chemical equipment sales department of the *Pfaudler Company*.

W. B. Nixon, vice president-sales of *Campbell Soup Company*, is now responsible for the sale of all frozen foods as well as heat processed foods. **H. G. Scowcroft** has been appointed director of marketing development; **H. C. Sanner, Jr.,** sales manager-heat processed foods; **F. H. McGuiness,** sales manager-frozen foods; and **E. A. Vassallo,** product marketing manager.

Dr. Neil W. Berst has been promoted to director of research laboratories of *The Diversey Corporation*.

Jesse G. Heiges has been elected secretary and general counsel of *Chas. Pfizer Company, Inc.*

The Joseph B. Lynn Company, Sacramento, Calif., has been appointed broker for *Derby Foods, Incorporated*, packer of Peter Pan peanut butter and Derby canned meats, for the Sacramento and San Joaquin territories in California.

Clinton Foods Incorporated has started construction on a two-story research laboratory at its Clinton, Iowa, plant. The 100 x 120-ft. brick, glass and steel structure will cost an estimated $750,000.

John L. Dupree has been elected vice president of the *Dole Hawaiian Pineapple Company*. Mr. Dupree will be in charge of all public relations activities of Dole and its subsidiaries.

James McGowan, Jr., who has served *Campbell Soup Company* for 47 years, has retired as chairman of the board. He will continue as a director. **Oliver G. Willits,** who has been vice chairman of the board of directors since 1953, succeeds Mr. McGowan.

John A. McGlinn, Jr. has been elected vice president-marketing of *Campbell Soup Company*.

Hunt Foods, Incorporated has appointed *Paul Sayres Company, Inc.*, 35 Beechwood Ave., Mt. Vernon, N. Y., exclusive representative to the grocery trade for "Pride of the Farm" tomato catsup in the metropolitan New York and New Jersey area.

Hal M. Chase has been elected to the new position of vice president and director of marketing for the *Dole Hawaiian Pineapple Company*.

Albert Bramer

G. L. Meyer

W. F. & John Barnes Company, food and container section, Rockford, Ill., has appointed *Albert Bramer & Associates*, St. Louis, exclusive sales representative in the south central region.

George L. N. Meyer, Jr. has been appointed a vice president of the *George J. Meyer Manufacturing Company*, Cudahy, Wis., and general manager of its *Economic Machinery Company* division.

National Food Brokers Association announces the following new members: *Stranton-Dillingham Company*, 251 E. 5th So., Salt Lake City; *R. A. McEachen Company*, 225 W. 23rd St., Los Angeles 7; *Albert & Raitio, Incorporated*, 3554 W. Fullerton Ave., Chicago 47; *John Behr Company*, 1717–17th St., San Francisco; *Thomas F. Harkin*, P. O. Box 83, Watervliet, N. Y.; *Harry E. Hales*, Suburban Square Bldg., Ardmore, Pa.

Anderson, Clayton & Company has announced that the name of its division—*Mrs. Tucker's Products*—will be changed to *Anderson, Clayton & Company Foods Division*. The company has also announced appointments of three new advertising agencies: *D'Arcy Advertising Company, Inc., McCann Erickson, Incorporated*, and Paris & Peart, Incorporated.

Mrs. Janet Crawford Taylor has returned to *National Cranberry Association* as home economics director.

Norbert H. Volle has been named to the newly-created post of manager of product development for the processed foods division of the *Kroger Company*.

The Trade Winds Company, frozen breaded shrimp packer, has announced the immediate resignation of company president **William Mullis** and sales representative **Robin Roberts. Henry Ambos,** vice president and partner, will assume activities as president of the company.

Lawrence H. Flett of the National Aniline Division of the *Allied Chemical & Dye Corporation*, has been elected chairman of the *American Chemical Society's* Division of Chemical Marketing and Economics.

Dow Chemical Company has announced the opening of a sales office in downtown Buffalo at 70 Niagara Street to service a territory that covers a substantial part of New York State, extending east to and including Utica. It also will serve a 10-county section of northwest Pennsylvania.

John Bode has been appointed to the *Milprint, Incorporated* sales staff.

H. Oldenkamp

M. Asproyerakas

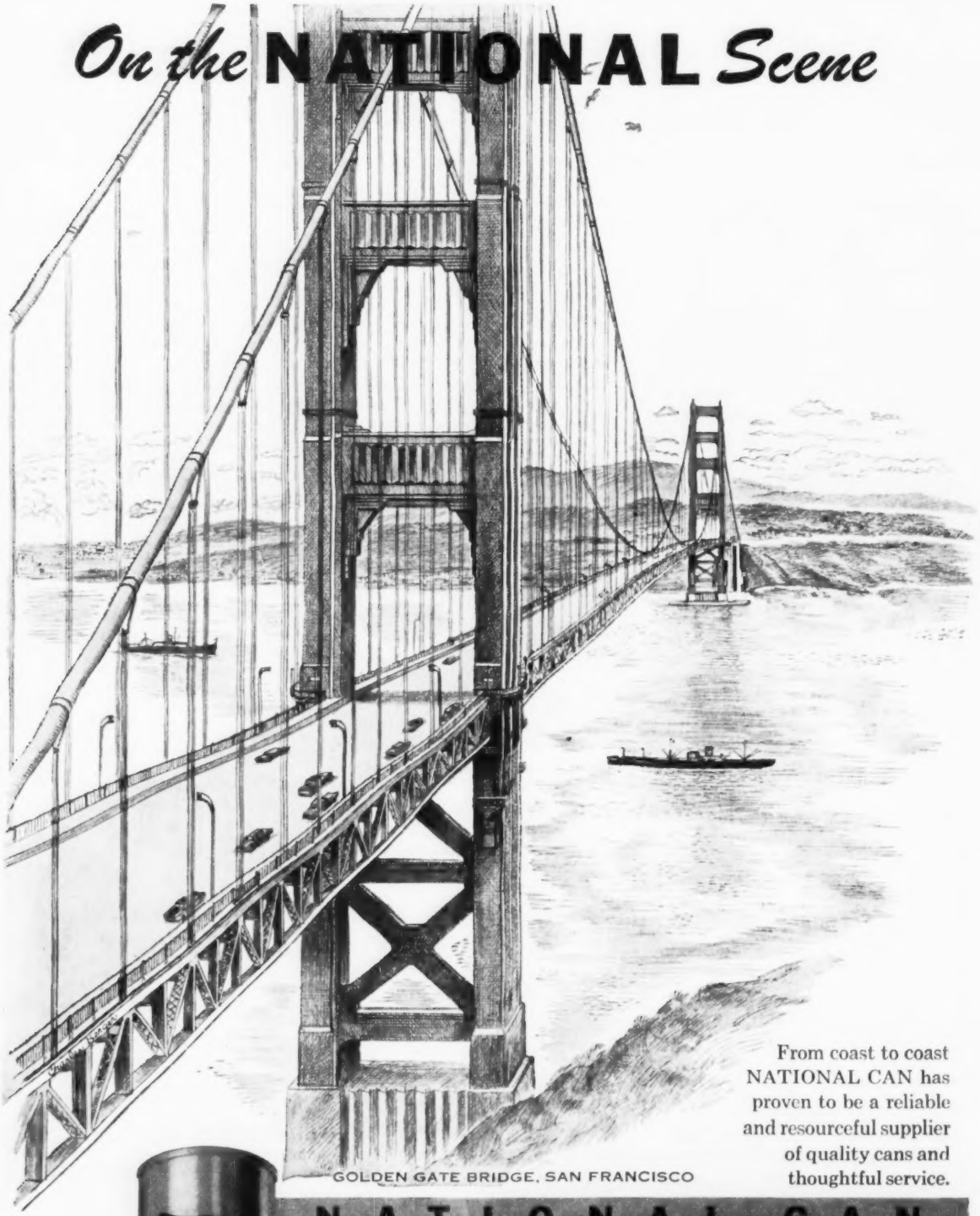
Henry A. Oldenkamp has joined *Food Machinery & Chemical Corporation* as manager of central engineering.

Minos Asproyerakas has been appointed plant engineer of *The Kitchens* of *Sara Lee, Incorporated*.

Adrien J. Falk, president of *S&W Fine Foods, Incorporated*, has announced his intention to retire within a few months after more than half a century in the food business.

William M. Campbell, *Fayette Canning Company*, Washington C.H., Ohio, died March 10 in Miami Beach, Fla.

On the NATIONAL *Scene*



GOLDEN GATE BRIDGE, SAN FRANCISCO

From coast to coast NATIONAL CAN has proven to be a reliable and resourceful supplier of quality cans and thoughtful service.

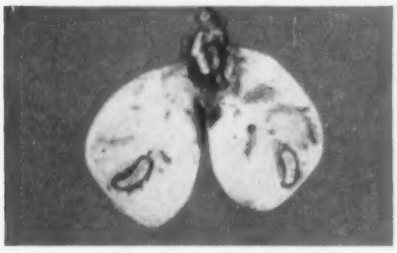
NATIONAL CAN CORPORATION

CHICAGO • NEW YORK • SAN FRANCISCO
...PLANTS FROM COAST TO COAST

For BEANS, CORN and PEAS
DU PONT
DELSAN A-D
SEED PROTECTANT
COMBINATION INSECTICIDE AND FUNGICIDE FOR
CORN, BEANS AND PEAS
NET 7 OZS.
E. I. DU PONT DE NEMOURS & COMPANY (INC.)

Helps assure uniform stands that lead to top-quality yields

• "Delsan" A-D stops disease damage (shown here on lima bean seed). Contains "Arasan" SF-X for superior seed protection from time of seeding until stand is established.



• "Delsan" A-D stops insects before damage like this can occur. Contains dieldrin insecticide to protect seed from early attacks by seed-corn maggot (bean maggot) and similar soil insects.

Du Pont "Delsan" A-D protects seed from decay and insect damage

The double protection of Du Pont "Delsan" A-D on seed costs little. But it can pay big dividends in yield by eliminating the gaps in rows caused by soil insects or seed-borne disease. More important, "Delsan" A-D can save you the cost of a replanting job—often necessary when *both* seed enemies attack your crop.

On seed corn (field or sweet), beans (including limas), and pea seed, "Delsan" A-D helps assure better emergence, stronger early growth and increased yield. Contains "Arasan" SF-X and dieldrin. Available for commercial slurry treatment, or in 7-oz. home-treating size.

FOR VEGETABLES, CORN, LEGUMES... "Arasan" SF-M—specially designed for slurry treaters, seed mixers or blenders. Not for dust treaters. Contains 75% thiram, plus methoxychlor insecticide.

On all chemicals, follow label instructions and warnings carefully.

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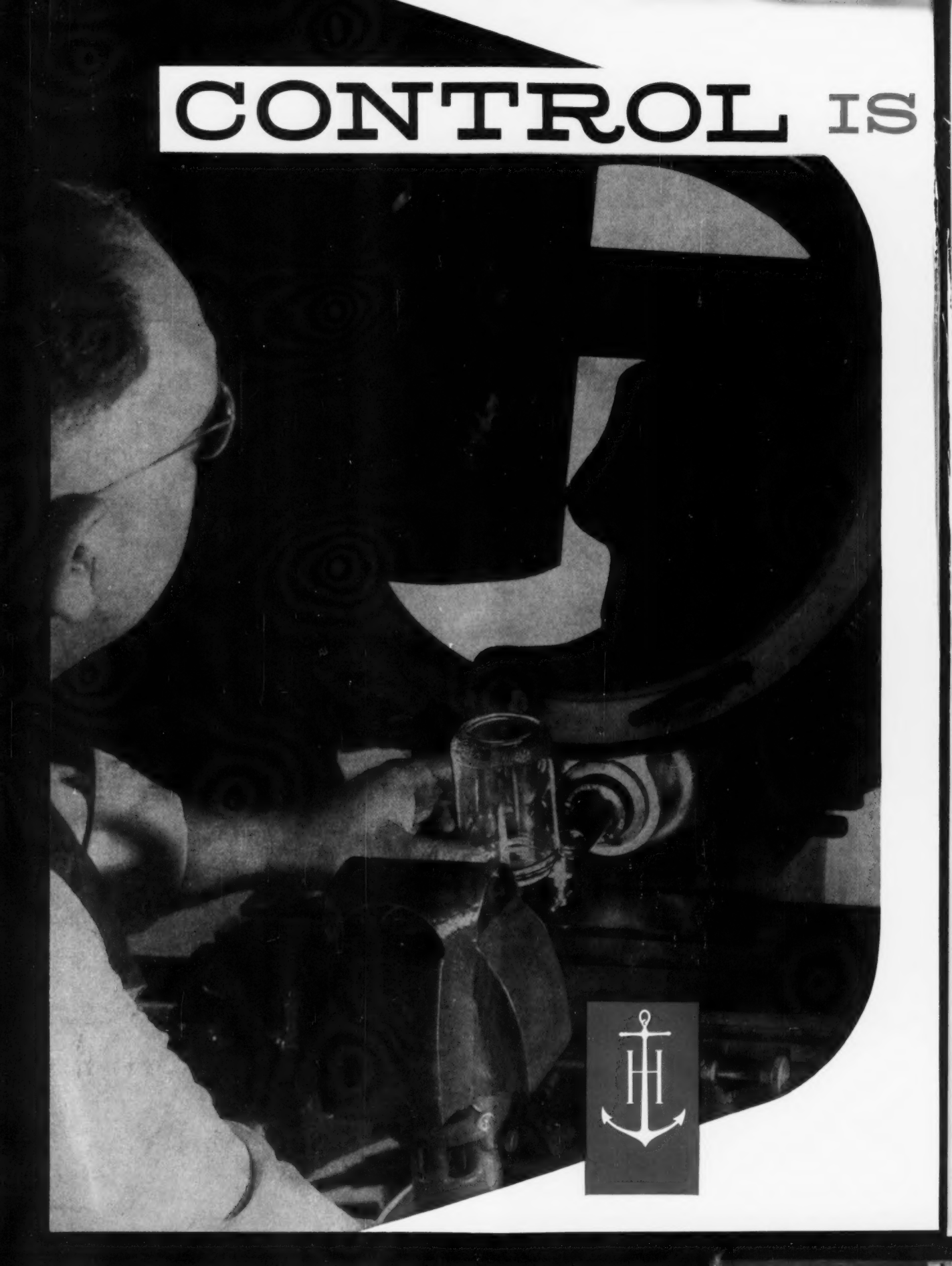
Combination Seed Protectant

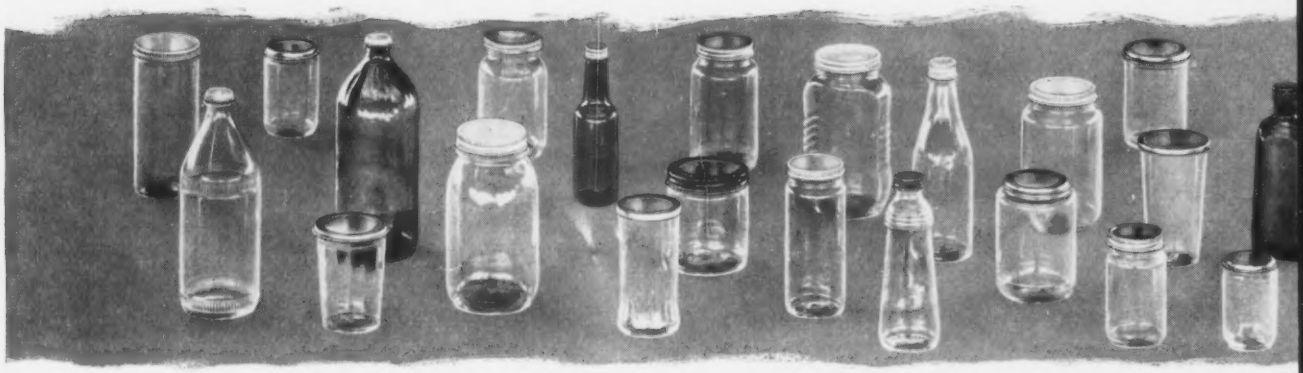
BETTER THINGS FOR BETTER LIVING... *THROUGH CHEMISTRY*

CONTROL IS



ALL-IMPORTANT

with Anchor Hocking!



Regardless of what you pack Anchor Hocking makes an Anchorglass container in a style, size and color to most attractively, efficiently and economically package it. And regardless of how you pack it—hot or cold—with or without vacuum, sterilized or processed, there's an Anchor cap and Anchor sealing machine to completely satisfy your diverse and specialized requirements.

THE controls applied throughout your production and packaging operations are all-important to you. By the same token, the manufacturing controls employed by Anchor Hocking are very important to you, also.

Anchor Hocking exercises literally hundreds of exacting controls, tests and checks daily in the manufacture of its glass containers and closures. From the selection of all raw materials used to the final inspection, every operation is under meticulous control.

And all of this control, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality, dependable Anchorglass® containers and Anchor® screw, lug, vacuum, metal and molded closures that will give you high-speed, dependable production and protection.

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GLASS CORPORATION *Lancaster, Ohio*

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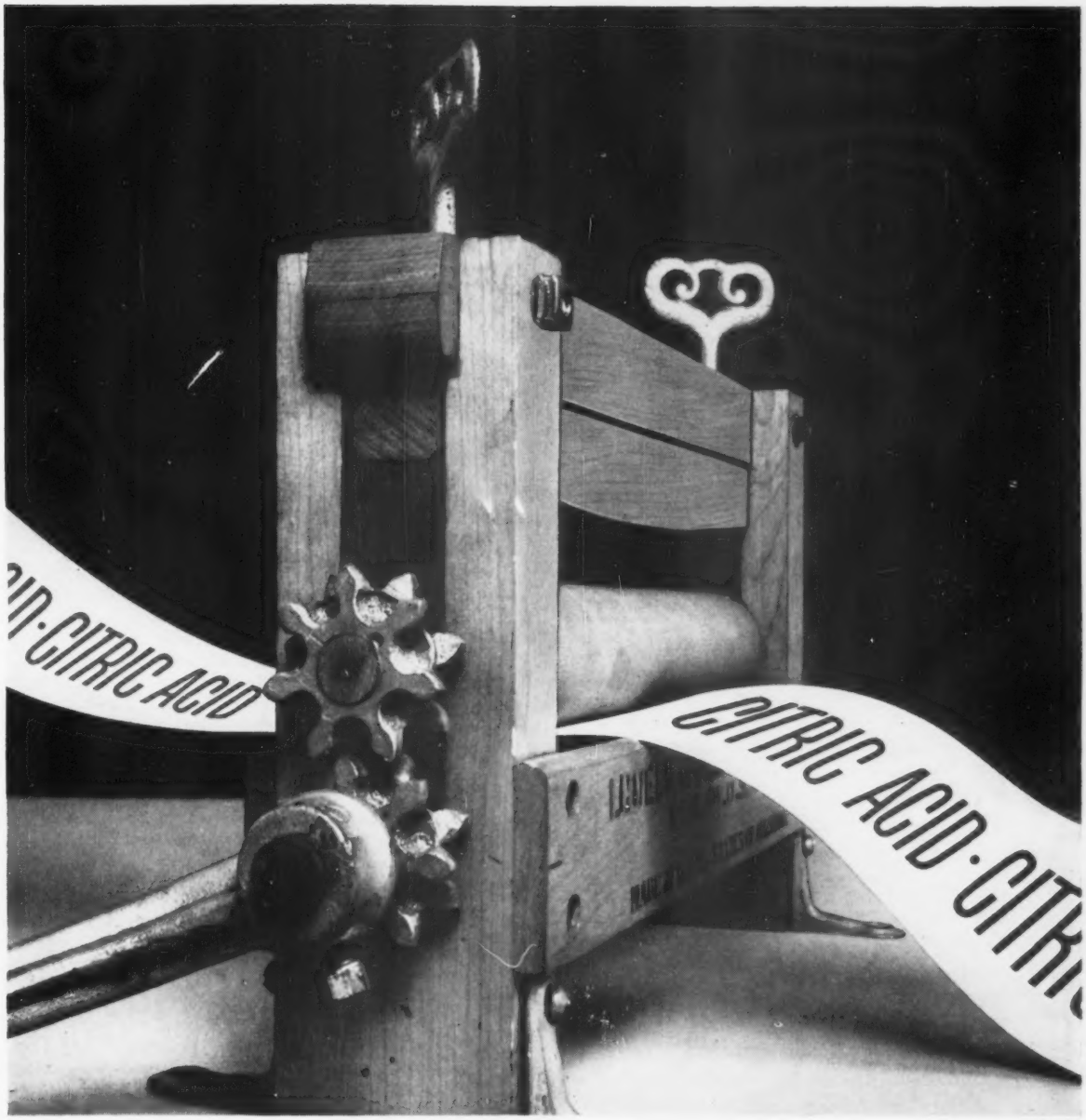
Twist on!

A perfect re-seal!

★HORMEL *Pigs Feet are packed by George A. Hormel & Company, Austin, Minnesota. The Crown Vacuum Lug Cap used on this product is attractively lithographed to complement the jar label.*



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Washington and You

Robert Y. Kerr, Washington Editor

FDA Conducts Multiple Tests

The Food and Drug Administration is carrying a heavy load these days in determining the safety of chemical substances in modern food processing technology, as well as cosmetics and therapeutic drugs.

At present the Administration is carrying on tests for cancer cures. But it seems that some reports about this project have created the inaccurate impression that the FDA is testing the healing properties of these tentative therapeutic agencies. Actually, the agency is testing these drugs for toxicity, to determine if they would be poisonous to the patient.

The National Advisory Cancer Council's committee on chemotherapy has selected the ten most promising of the 200 drugs that have been developed in this field and has asked the FDA to test them for toxicity. Each test takes from three months to two years, and the findings, like all other experimental deductions made by the FDA, must be accurate. The experiments are run on small animals. Each of the ten drugs chosen for testing is seriously considered to be a possible cure for some form of cancer.

●

The FDA laboratory is said to be the largest of its kind in the world. The agency estimates that since 1940 it has studied 25,000 new chemical food additives. Of this number, 20,000 were eliminated as acutely toxic; 4,000 were eliminated for sub-acute and chronic toxicity; 600 were eliminated for a complete toxic test; 150 were ruled in use without adequate testing; 100 were ruled safe within limits of use; and 150 were ruled harmless and are now in use.

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Food and beverage manufacturers have been advised by the FDA that three coal-tar colors have been removed from the list of those permitted to be used in food products. The regulation became effective February 15 and applies to mixtures containing the delisted colors, as well as the pure dyes. FDA ruled that food and beverage manufacturers may legally use up previously certified stocks of these colors, but cautioned that foods containing excessive quantities of such colors can cause illness to consumers. The colors involved are FD&C Orange No. 1; FD&C Orange No. 2; and FD&C Red No. 32.

The U. S. Court of Appeals for the fifth circuit temporarily stayed the regulation with respect to one of the dyes – FD&C Red No. 32 – for coloring the outer skin of oranges. The FDA consented to the stay on the basis that so far there is no evidence of harm to consumers from using this coloring on the outer skin of oranges. The Commissioner told a House Committee that the Department would not object to a bill (H. R. 7732) providing for continued certification of this dye for coloring oranges only, if limited to a period of three years. This would provide enough time for further scientific testing and for developing harmeless dyes.

Federal law requires all such dyes to be "harmless," regardless of the amount used; and when a color is certified as harmless, there is no restriction on the quantity which may be added to a food. The FDA reports that two of the colors, FD&C No. 1, and FD&C Red No. 32, have caused illness to consumers when used in excessive quantities in candy and popcorn.

These issues point up the difficult procedural aspects raised in several chemicals-in-food bills now pending before Congress, involving the duty of the FDA to protect the consuming public against toxic additives and also protecting manufacturers against a possibly inaccurate ruling that certain additives are "not harmless." Some of the proposed legislation would allow the use of additives before their harmlessness had been determined, while other pending bills would force the Secretary to go to the courts and sue for an injunction against the marketing of the questionable additive. Working these matters out scientifically and equitably puts a heavy responsibility upon the FDA and Congressional Committees. The constant search for new chemicals to "improve" foods is gaining in speed and volume. And the record of toxic discoveries in proposed additives, mentioned above, indicates the hazards against which the FDA is required to defend the public.

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It is estimated that in 1955 Americans spent $68 billion for food, and the industry is confident a new record for food expenditures will be set this year. The $68 billion in '55 compares with $64.5 billion in '54 and with $16 billion in '39. Much of the increase in dollar expenditure goes into the purchase of "convenience food" for which the housewife is willing to pay a higher price. President Paul S. Willis of the Grocery Manufacturers of America, says that a third of today's grocery sales are of items that didn't exist in their present form ten years ago or were just getting token starts.

The Department of Agriculture thinks that food costs on the average will be about the same this year as in '55. The increase in frozen food sales is attributed rather largely to the introduction of frozen pre-cooked dinners, meat pies, fish sticks and the like.

It used to be held by household economists that as national income rose the amount of disposable income spent on food declined in percentage measurements. The theory was that people could eat only about so much; and, with more money to spend, the housewives didn't buy more vegetables or meat than they could use. But at present, with a larger disposable household income, families are spending 25 per cent of this income for food, as compared with 23 per cent in 1935-39.

●

The request has been made of the Senate-House Committee that has held hearings on the President's economic message for a full scale investigation of middlemen and farm suppliers in regard to the report that these people are taking 59 cents of every dollar spent for food. President Lincoln of the Co-operative League of the USA told the committee this margin of 59 cents couldn't be explained away as the housewives' demand for packaging and service. Secretary Benson in a recent speech said that wage rates in food processing and distribution increased 43 per cent between 1947-49 and 1955. Less than half of this increase, he said, was offset by gains in labor productivity. In the same period, the retail price of food processed and distributed rose 26 per cent, with farmers absorbing a large part of the difference.

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Walk into the office of almost any food processing plant and take a look at the Robins catalog. You'll see unmistakable signs of constant usage. Why? Because when quality conscious food processors want to top the competition or cut costs, the first thing they grab for is their copy of the Robins catalog. They know that every piece of modern equipment illustrated and described between the covers is designed to give fast, quality production with proven savings in maintenance and operating costs.

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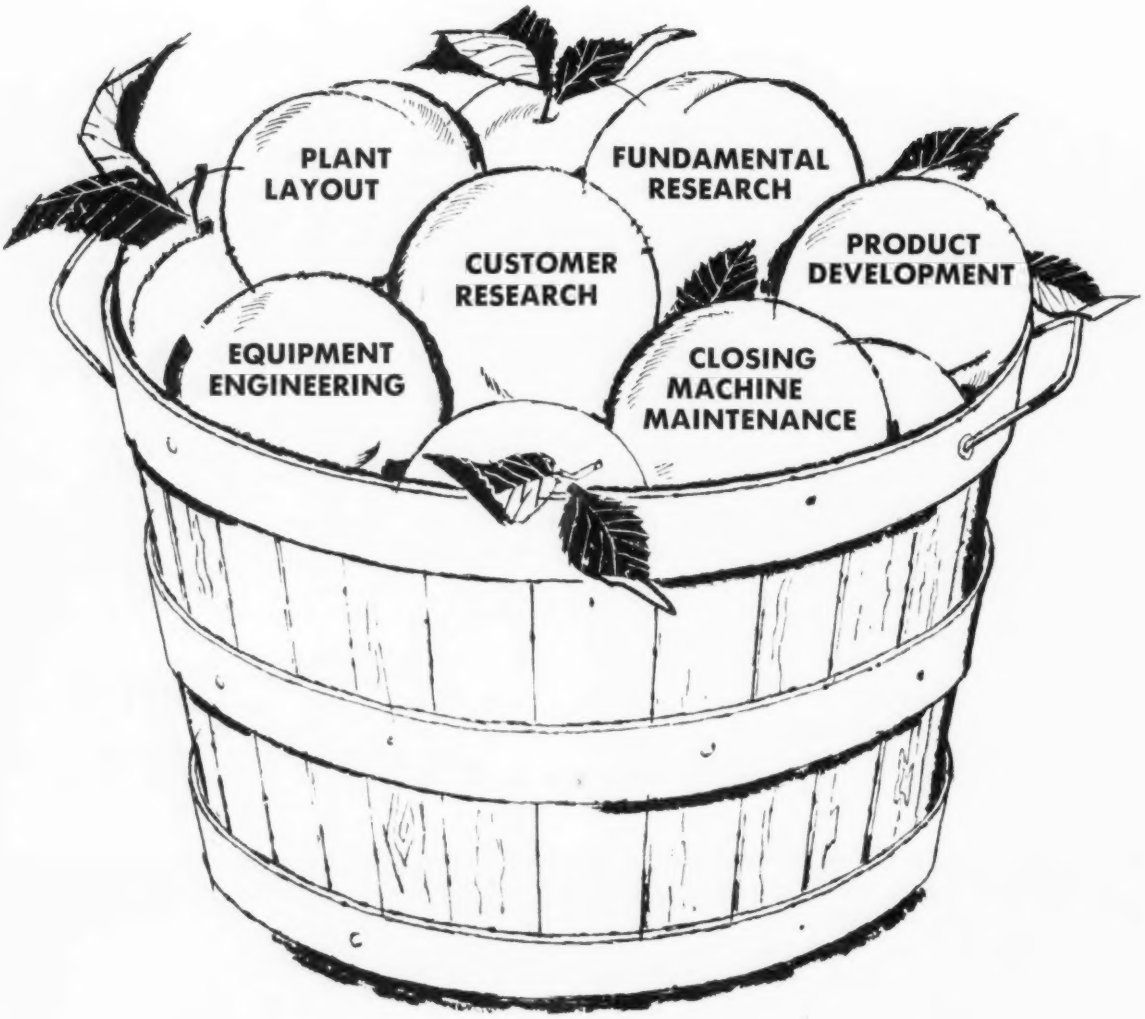

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Whatever you pack — whenever and wherever you pack it — Continental will arrive on the dot with all the precision-made cans you need. In addition, our staff of trained engineers and scientists is available to help you all year 'round. They'll see to it that you get just the right kind and amount of service to keep your lines running smoothly. That's Tailor-Made Service — from Continental. So why not call soon? Doing things your way — all the time — is our specialty.

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Spotlighting the NEWS

New Northwest Association Elects Officers

First officers and board members of the Northwest Canners & Freezers Association for the first term are: – (left to right, seated) C. R. Tulley, H. G. Hohwienser, N. W. Merrill, Arthur Reiling, Tom House. Standing, (left to right) E. A. Seiter, S. E. Lasselle, L. D. Jones, M. F. Smith, Adolph Hraba, J. F. Hill, Max Lehmath, B. C. Blair.

The newly formed Northwest Canners & Freezers Association, a merger of the Northwest Canners and Northwest Frozen Foods Associations, was legally formed recently with the issuance of a certificate of the merger by the Oregon Corporation commissioner.

At the Association's meeting last month, at which officers were elected, spokesmen declared that the new group will permit a greater concentration of effort on programs of interest to the fruit and vegetable processing industry in the Pacific Northwest. Increased progress in research in food preserving methods also is planned by the organization.

Atomic Boiler Possible

A compact, packaged, atom-fired boiler that will produce economical steam, heat and hot water for industry may be only a few short years away, according to Fred H. Klein, president of Orr & Sembower, Reading, Pa.

Mr. Klein, an outstanding authority on heat generation, bases his prediction on the highly favorable results being realized in experimental studies pertaining to the use of atomic power in aircraft and marine fields. Fuel costs, he claims, will be extremely low (initial cost of boiler may be more) if for only one reason – replenishment of fuel would be trivial.

Power source in the new theoretical boiler will come from a small atomic stockpile, well-shielded to prevent escape of harmful radiation, to injure employees.

Convention Survey

As this issue of *Food Packer* goes to press, it is too early to make an authoritative report on the results of our industry-wide survey pertaining to the "do's and dont's and why's and wherefore's" of the national convention.

Preliminary returns indicate avid interest by canners from coast to coast, with further indication that those who so far replied have given much thought to the matter. This implies that the consensus, when finally tabulated for publication in the May issue of the magazine, will produce a very interesting and authentic opinion of canners regarding possible future action to be taken to make the convention more adaptable to their needs.

Any canner, processor, broker, supplier or other affiliated person who did not receive a questionnaire form, may obtain one by writing the editor of this magazine. Those who have not forwarded their questionnaires are urged to do so.

Modern Pear Ripening Installation

Plans have been completed for the erection of a controlled pear ripening building at the San Jose (Calif.) plant of the Tri-Valley Packing Association. According to association officers, the facilities will be the most modern possible, with all the latest ideas incorporated in the controlled ripening of pears. It will have six separate, insulated rooms, each room separately controlled for heat and humidity and with provision for rapid cooling and holding of fruit. Each room will have a capacity of 12,000 boxes, the equivalent of one day's run.

It is hoped that the building will be completed in time for the 1956 canning season.

California carloading clinic panel that conducted a meeting at Oakland, consisted of (left to right) W. C. Emerson, Western Pacific; H. L. Comstock, Southern Pacific; E. J. Kraska, canned goods specialist, Association of American Railroads; E. B. Murphy, Canners League of California; and W. D. Dickman, Sante Fe.

California Canners Hold Carloading Clinics

The importance of good car loading and safe car handling in overall nationwide merchandising of canned goods again was stressed at a recent series of carloading clinics sponsored jointly by the Canners League of California, Association of American Railroads and California Terminal Railroads.

Carrying the theme "Delivering the Perfect Can to the Consumer" the program pointed up the role and responsibility of the carrier and the shipper in delivering damage-free merchandise. Clinics were held in Sacramento, Modesto, San Jose and Oakland.

Jars Make The Sale

According to a survey recently completed by the Home Makers Guild for Owens-Illinois Glass Company, more than 8 out of 10 housewives who preserve foods at home would purchase a particular brand of food packed in freezer home canning jars in order to obtain the jars for home canning operations.

The home market, the survey reveals, for the straight-sided, wide-mouthed jars, is equivalent to approximately 63 per cent of the primary families in the United States. Of the homemakers in this category, more than 9 out of 10 have home-preserved fruits, either by canning (40.2 per cent), or freezing (18.5 per cent) or by both canning and freezing (41.3 per cent).

Seventy-five per cent of the homemakers who do home canning say they would purchase freezer-home canning jars for such use. They state the advantages of these packages lie in "size of opening," "shape," and "ease of keeping clean." The 17-oz. and 25-oz. sizes are more popular, according to survey results, than either the 12- or 20-oz. containers.

Tin Can Going, Going . .

Familiar metal cans in this country will be "unrecognizable" by present standards within a relatively few years, is the prediction of a man who should know, William C. Stolk, president of American Can Company. And to this prediction the can manufacturing executive added, "Even the factories which produce these containers – currently at the rate of 38 billion a year – may eventually undergo a similar striking change." He made these predictions in a talk delivered on "planned obsolescence" before the Sales Executive Club of New York.

Research, he claims, is turning up new materials and production methods that are making possible cans for many products never before packed in metal containers.

CM & SA Announces Committee Chairmen

C. K. Wilson, president of the Canning Machinery & Supplies Association, recently announced rosters for eleven committees to serve during 1956. Committees and their chairmen are: Publicity – Jules L. Bauer, Interchemical Corporation, New York; Membership – M. R. Feeney, Lansing B. Warner Company, Chicago; Door Awards – J. W. Fisher, Ball Brothers, Muncie, Ind.; Hotel Allotment– Harry A. Miller, Burt Machine Company, Baltimore; Audit – E. N. Funkhouser, Dewey & Almy Chemical Company, Cambridge, Mass.; Executive Exhibit – F. S. Ward, Taylor Instrument Company, Rochester, N. Y.; Ladies Day – John C. Swift, White Cap Company, Chicago; Technical Program – M. R. Feeney; Resolutions – E. N. Funkhouser; Sanitary Construction Recommendations – W. E. Vaughn, American Can Company, New York; Dinner Dance – John C. Swift.

Miller Amendment Clarification

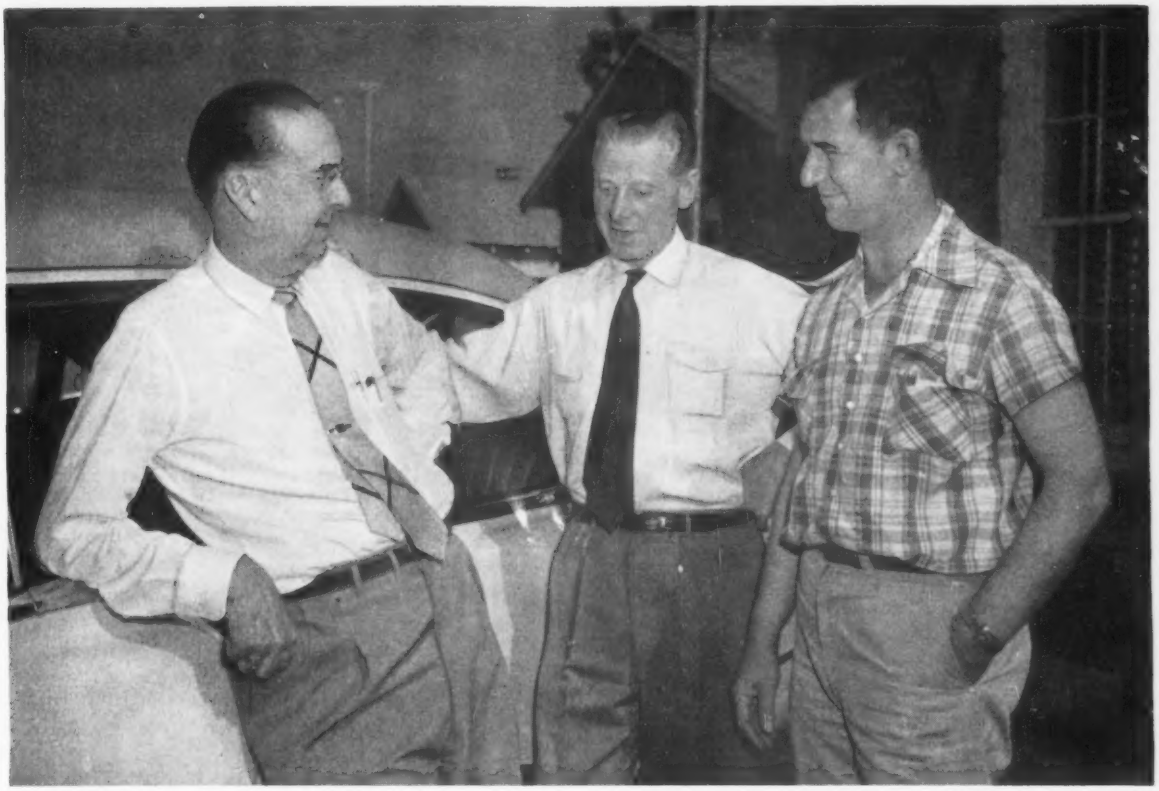
Growers have nothing to concern themselves about regarding the new Miller amendment to the Federal Food & Drug Act if they adhere strictly to approved label directions in applying sprays and dusts.

The amendment does not change the basic requirements of the Act that foods in interstate commerce shall be free of dangerous amounts of spray residues. What the amendment does set up is a more realistic procedure for meeting the law's requirements.

As is known, the purpose of the law is to permit growers to use pesticides in producing food without hazard to consumers. Growers cannot afford to be careless in applying pest control materials. They must not have excessive residues on crops at the time of harvest. Growers who deviate from the label directions should do so only on the basis of reliable advice that there will be no excessive residue.

Seasoning Reference Book

Just off the press and available for general distribution is the new Dodge & Olcott "Reference Book and Catalog of Flavors and Seasonings." The book, according to the company, has been more than a year in preparation. It contains 68 pages of basic flavor and seasoning information.



Joe M. Steele, president, Steele Canning Company (left) visits his Fort Smith (Ark.) plant, 75 mi. south of company headquarters at Springdale, Ark. With him, discussing plant and pack policy for a high grade spinach pack are M. M. Hunter (center), Fort Smith plant manager, and Frederick Edmundson, quality control supervisor.

In Arkansas It's . . .

Spinach By Steele

- **Selective Crops**
- **Precision Cleaning**
- **Rigid Standards**
- **Quality Checks**

Joe Steele, the Ozark region's biggest canner, divides production of five million cases of canned foods annually, representing 50 different products, among seven canneries in Arkansas and Oklahoma. Like other efficient multi-plant operators, Steele distributes the work on the basis of each plant's ability to pack certain products with maximum efficiency.

This major operating policy has brought success to Joe Steele, a 50-year-old dynamo who started canning food some 30 years ago under the humblest of circumstances (see *Food Packer's* cover story, August 1955). His products are eaten and enjoyed throughout the United States, and his 1,100 private-label accounts probably constitute a record-high number in the nation's canning industry. His canner-food broker relationships are recognized nationally as loyal, aggressive and mutually profitable.

Typical of the Steele method of processing food is the spinach operation at Ft. Smith, Ark., 75 miles south of the Steele Canning Company headquarters at Springdale, Ark. The Ft. Smith cannery, modern in design and equipment, has a capacity of eight-to-nine tons of high-quality spinach per hour. The plant layout enables spinach to be processed smoothly, with a minimum of waste and hand labor, and with adequate opportunities for tight quality control of the raw and finished product.

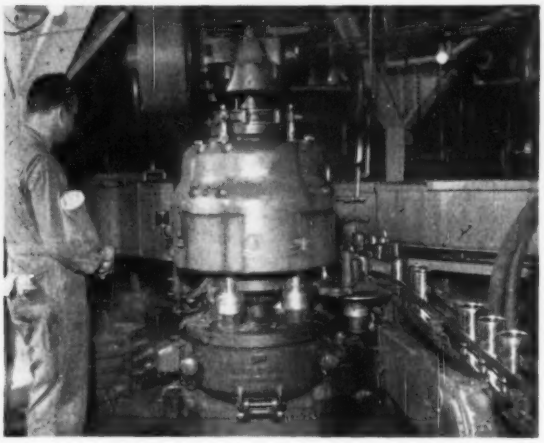
Spinach for this plant is grown in the fertile Arkansas River Valley. Although Joe Steele *never* writes a grower's contract, the farmers in that area who grow this fine, curled-leaf spinach, as well as other crops used by Steele plants, know the rigid requirements that must be met, and usually meet them. Nevertheless, company field men virtually "live" with their growers and pass final inspection on the field before it is ordered cut for the Ft. Smith cannery.

Spinach Mechanics

Spinach arrives at the cannery in loads of five-to-six tons each, and is forked from the truck into La Porte chain conveyors. These conveyors empty onto a feeder belt that discharges into four company-built dry washers.

1 Spinach is filled into cans on one of three CRCO hand-pack fillers. Salt is dispensed into each can with a Morton dispenser (right). Note rubber gloves worn by workers.

2 Spinach leaves filler and is check-weighed on Exact-Weight scale on its way to exhaust box and closing machine. Cans are supplied by Heekin Can Company.



3 Canco closing machine seals 303-size cans of spinach at speeds of 250 per min., and up.

4 In modern, sanitary Fort Smith quality control laboratory, canned samples are religiously inspected.

The spinach leaves the dry washers and passes over four inspection belts where eight women to a belt inspect the product in dry form.

Another conveyor receives the spinach from the inspection belts and takes it to two paddle-type soak tanks. The spinach continues into a rotary spray washer where water, under great pressure, virtually blasts away any foreign material. Steele's spinach is advertised as "grit-free" and claims are never questioned because of this extensive, thorough cleaning and washing process.

The spinach emerges from the rotary washer and passes over another inspection belt where workers look for yellow leaves and foreign vegetation, then it is conveyed into the company-built blancher. This machine is 4 ft. wide, 1-1/2 ft. high, and 45 ft. long. Here the spinach is wilted, air is removed from it, and the color is set.

A short conveyor takes the spinach into the enclosed, air-conditioned packaging room. It arrives on an overhead conveyor which feeds the three Chisholm-Ryder hand-pack fillers. Currently, two of the fillers fill 303 cans and the other, 2-1/2 size can. Each filler is equipped with a Morton tablet salter. The company uses Heekin cans made in Springdale.

Filled cans are check-weighed on the Exact-Weight scale, then leave the packaging room by conveyor, and pass through the exhaust box where hot water is added (the cans contain only spinach, salt, and hot water). Next, they are sealed on Canco closing machines, cooked in upright retorts, cooled, and sent by overhead conveyor to the new warehouse, a separate building 100 x 200 ft. in size.

Although in-plant quality control is methodical and systemized at the Ft. Smith cannery, procedures are relatively trouble-free. "We get the product just before it comes to the plant," says Joe Steele.

Safety Checks

However, periodically during the working day, canned samples from each load are brought to the clean, tiled laboratory and are checked for proper net weight and drained weight, defects, and other factors that follow U. S. Department of Agriculture specifications. Because of this all-inclusive quality program and also because plant production is geared to the quality of the incoming raw product, the Ft. Smith spinach grades predominantly fancy.

Amended Federal Wage-Hour Law

U. S. Administrator Interprets Law For Canning Industry

Part I

BY
NEWELL BROWN
Administrator
Federal Wage-Hour Law

On March 1 the minimum wage under the Fair Labor Standards Act was increased to $1.00 an hour.

Approximately two out of three production workers in the canning and preserving industry were already earning that amount, according to an official government survey. The new minimum means direct pay increases for about one-third of the present production workers.

Newell Brown

In addition to noting the new minimum wage, many canners may profit by reviewing other provisions of the Act so that unintentional errors may be avoided.

Basic Requirements

Basic provisions of the Fair Labor Standards Act require:

(1) Minimum wage of $1.00 an hour.
(2) Overtime pay of at least time and one-half the employee's regular rate for all hours worked over 40 a week.
(3) A minimum age of 16 years for most jobs, and 14 for a few jobs. In addition, there is an 18-year age minimum for work in occupations designated hazardous by the secretary of labor.

These requirements apply to employees who are engaged in interstate commerce or in the production of goods for interstate commerce, including occupations closely related and directly essential to such production. The interstate activities of most establishments in the canning industry bring their employees within the scope of the law. Coverage applies not only to workers who are engaged in actual canning or processing jobs, but also to clerical, maintenance, shipping and sales employees.

When an employee engages in both covered and noncovered activities in any workweek, he is covered for that week. All covered employees are entitled to the statutory benefits, unless a specific exemption applies.

Canning and "First Processing" Defined

Before exemptions are discussed it may be helpful to explain the meaning of "canning" as interpreted in the Act. The term means hermetically sealing and sterilizing or pasteurizing and refers to a process involving the performance of such operations. Necessary preparatory operations on products, as well as placing them in cans or glass containers, also are included in "canning." Subsequent operations such as labeling, packing, etc., also are considered part of the overall operation.

Many canners engage in what are termed "first processing" operations in addition to canning. First processing means the first change in the form of the fresh fruits or vegetables and thus includes freezing operations.

Various Exemptions Available

Employers who can, freeze, or perform other first processing operations on fresh fruits or vegetables are able to operate for a total of 28 weeks a year with reduced or no overtime pay obligations. But, if a canner is within the "area of production" as defined by the Division's administrator, he may take a complete year-round exemption from both the minimum wage and overtime pay provisions. The area of production exemption, however, does not apply to freezing and other first-processing operations. There also is a minimum wage and overtime pay exemption for certain white-collar workers which may interest canners and processors.

Perishable Commodities Exemption

Under one exemption, employees engaged in freezing and other first processing operations or canning of perishable or seasonal fresh fruits or vegetables, are exempt from the overtime provisions of the Act during a period or periods not exceeding a total of 14 workweeks in the calendar year. It is important to remember that this exemption applies only to the establishment where the specified operations are carried on, and then only to two groups of employees—(1) those actually engaged in the first processing or canning of fresh fruit and vegetables, and (2) those whose work is a necessary incident to these operations and who work solely in the portions of the premises devoted by their employer to such operations.

During the weeks (up to 14) a plant is *exclusively* engaged in the canning or first processing of perishable or seasonal fresh fruits or vegetables, all employees working in the plant, including office help, maintenance workers and janitors, are exempt.

Exemptions from the overtime pay requirements provided for first processing may also include by-product operations of the commodities.

Seasonal Industries Exemption

A limited exemption from the overtime provisions is provided for industries that the Division's administrator specifically finds to be of a seasonal nature. The canning and first processing of perishable or seasonal commodities have been classified as seasonal industries. The seasonal exemption is available for as many as 14 weeks in a year, and it is an exemption from the overtime provisions *only*. The seasonal exemption places a restriction on the number of hours that may be worked without payment of overtime. During the 14 workweeks in which exemptions are taken, employees must be paid time and one-half their regular rate of pay for all hours worked over 12 in a day or 56 in a workweek.

Once it is determined that an industry is seasonal, the exemption gained is an *industry* exemption and does not differentiate between type of employees, or location of work.

Canners and first processors should be able to handle most of their pack without paying overtime by taking the two 14-week overtime exemptions to which they are entitled. The employer is free to decide when to take the 14-week period for the complete exemption so long as the specified operations are being carried on at the time selected. He is free to select any 14-week period for the limited exemption. The two exemptions may be taken consecutively if the employer so chooses, although the weeks during which exemption is claimed need not be consecutive. Of course, the minimum wage requirement of $1.00 an hour must be observed without exception.

The decision to take exemption may

(*Continued on Page 42*)

Into the "mouths of babes"

"From the mouths of babes," says the old proverb, great truths often come. But in the modern food trade *it's what goes into the mouths of babes* that points an important moral.

And the moral is that when it comes to closures, it's a good idea to note how the young mothers of America have demonstrated just which type of glass packaging they'll buy!

When packaging planners and merchandising experts look at the baby food success story, one potent fact always stands out like the harvest moon in the sky: *Every bit of today's tremendous volume of glass-packed baby food, without exception,* IS SOLD IN PRY-OFF CAPPED PACKAGES.

Thus, the biggest selling single item in the packaged food field delivers an unqualified testimonial for the great saleability of the pry-off capped vacuum jar.

The packaging plans of all the baby food packers testify, in a spectacular way, that *the pry-off capped glass jar is a package the shopper has faith in, a package she buys readily, confidently.*

Using this package, the young and growing baby food industry has soared to a sale of more than 1¼ billion glass packages a year.

Using this package, the baby food industry has proved that the modern generation of consumers sees the pry-off cap a welcome aid and guardian.

And—with this package, the baby food industry has made it easy to give babies the full variety of foods they need—foods which are building a new generation of healthier, stronger children.

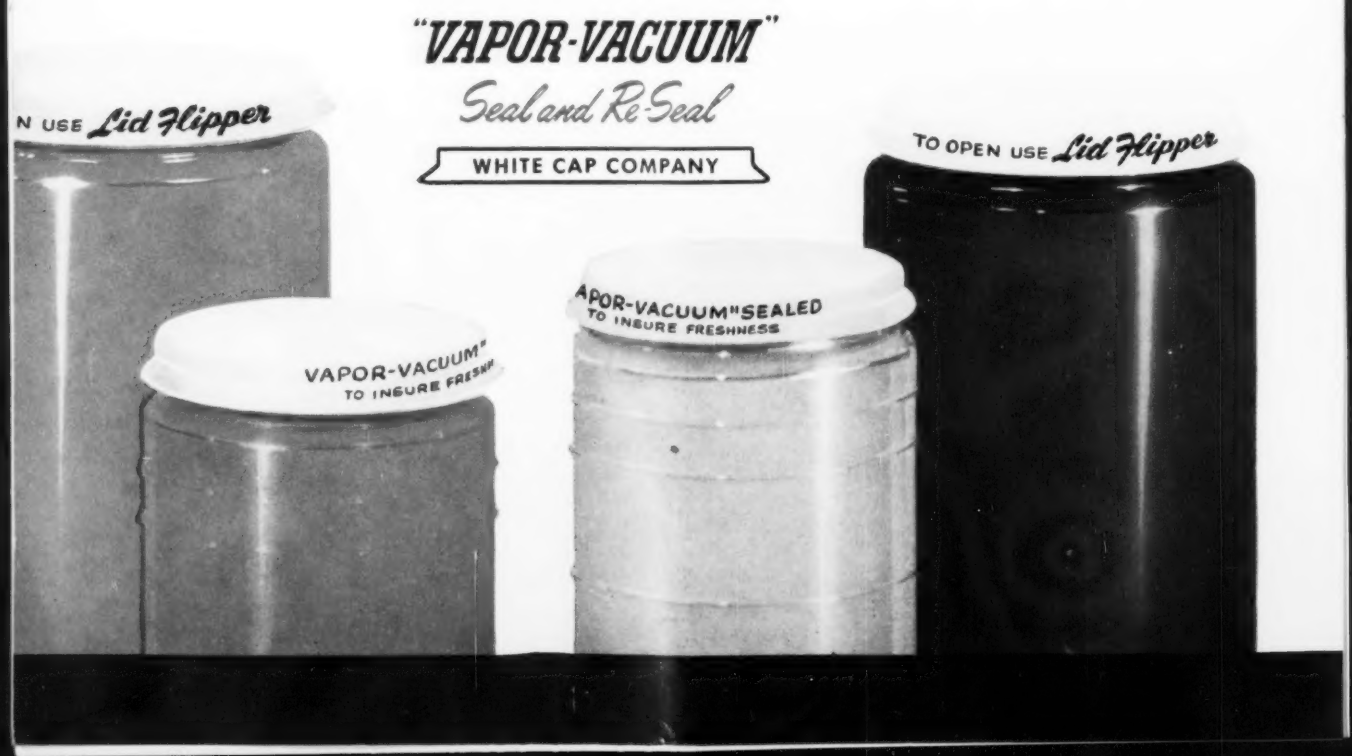
Faith—born of experience

In baby food, as in other fields, the great thing about the vacuum pry-off cap is that it *serves both packer and consumer equally well.*

In the plant, the vacuum pry-off capped package is fast, sure, economical. *After it leaves the plant,* it's completely dependable. And *in the home,* the convenience of serving direct from the jar, plus the protection of the hermetic re-seal, make this package a universally popular household aid.

The tremendous mass response to this package makes it clearer than ever that *shoppers buy what they have faith in*—and that the vacuum sealed pry-off package is, therefore, a solid sales builder.

4-56



At the instant of decision...

. . . the shopper's hand reaches out for the pry-off capped package, the most popular glass package in the world. She buys it because she has faith in it—and because she likes it.

And now, to make this package even better for her, *she has her LID-FLIPPER*, White Cap's great contribution to her kitchen-aids line-up.

(The Lid-Flipper makes pry-off caps easiest of all to open.)

PRODUCT OF **WHITE CAP COMPANY** CHICAGO 39

WILBUR A. GOULD, PH.D.

Ohio State University

Quality Control EDITOR

Quality Control Clinic

Instrumentation In Quality Control

Part II

Last month this department introduced an article dealing with the various instruments necessary to conduct an efficient quality control laboratory program. This is a continuation of the information contained therein.

Probably the most difficult problem encountered in the quality control laboratory is the evaluation of color through the evaluation and standardization of product quality. Our cover shows a Macbeth Executive light, a fairly mobile standardized light source. It should be used for subjective color evaluation of raw and processed products. The unit has a color-corrected light source which is composed of two 300-watt reflector flood lamps with two 7-1/2-in. Macbeth daylight filters. This combination produces the closest duplication of north sky daylight (7500 deg. Kelvin) that is commercially available. Larger units also are available for lighting large areas. One outstanding feature of the unit is that it offers complete in-plant standardization. This is a basic requirement for any laboratory where subjective color grading is conducted. To make this more objective, some type of benchmark must be used. Fig. 1 illustrates the Macbeth-Munsell Disc Colorimeter unit. It has the same light source as the Executive unit. In addition, standardized discs or color plates are used. This unit has been adopted by the USDA Processed Foods Inspection Service for grading of tomato juice and other tomato products.

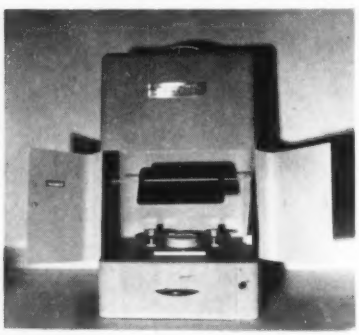


Fig. 1—Macbeth-Munsell Dics Colorimeter used by the USDA for grading tomato juice under standardized illuminating conditions.

Several Color Instruments

Various companies have developed objective color instruments. Two of these appear to offer the tomato industry much in the way of standardizing the grading of raw and processed products. Fig. 3, Model E Agtron, is the official color evaluating instrument of the California State Department of Agriculture. It also has been found to be satisfactory in Ohio.

Fig. 3, Model F Agtron, is an objective color instrument used for liquid and powdered products. In Fig. 4 data are given for the objective evaluation of canned tomato juice quality. These data are compared to data collected with the GE recording spectrophometer. Mavis has shown a correlation coefficient of 0.92 with the Agtron and USDA color score for canned tomato juice.

In-Line Instrument

A further application of this instrument (Agtron Model F) for the quality control technologist is an in-line or an in-stream instrument. This instrument, Model FX Agtron, is shown in Fig. 5. Data collected by Mavis shows a correlation coefficient of 0.94 with this instrument and the Model F Agtron. It offers the greatest possibility for the automation of liquid, semi-liquid and granular products for the evaluation of product color during manufacture. Other in-line instruments are mechanical size graders, temperature and pressure regulators and controllers, salt and sirup density controllers and fill controllers (volume or weight).

Many other examples of laboratory and in-stream control instruments could and should be discussed. However, the above illustrations should serve to show the advances made for the control and evaluation of the quality of raw and canned products.

Fig. 6 is the organizational chart for a quality control department. It serves to show the function of a quality control department and its place in the management scheme. It should be emphasized that one of the main functions of the quality control staff

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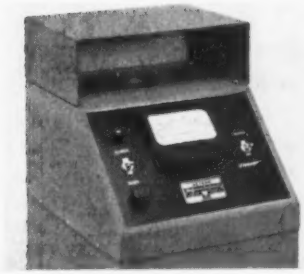


Fig. 3—Model F Agtron used for evaluating tomato juice color and other liquid and semi-liquids.

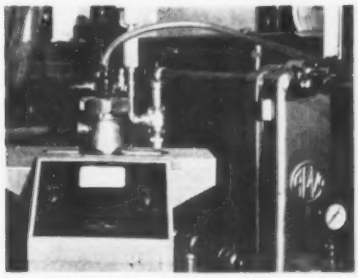


Fig. 4—Model FX Agtron used in the research and control laboratory for continuous color evaluating tests.

is to prepare reports revealing data collected in their tests and experiments. In this regard special emphasis must necessarily be placed on statistical, graphic and written interpretation of findings for management's information and future guidance.

In summary, the quality of canned products is a result of intelligent and effective control of (1) raw products, (2) production and processing practices, and (3) packing according to given standards. Effective use of instruments to evaluate objectively product quality makes for greater uniformity and standardization of the degrees of quality for any given product packed under any given label.

The quality control department serves as the "nerve center" for the control of product quality. The modern food processor has a quality control department staffed by trained technologists who use instruments for objective evaluation and control of quality.

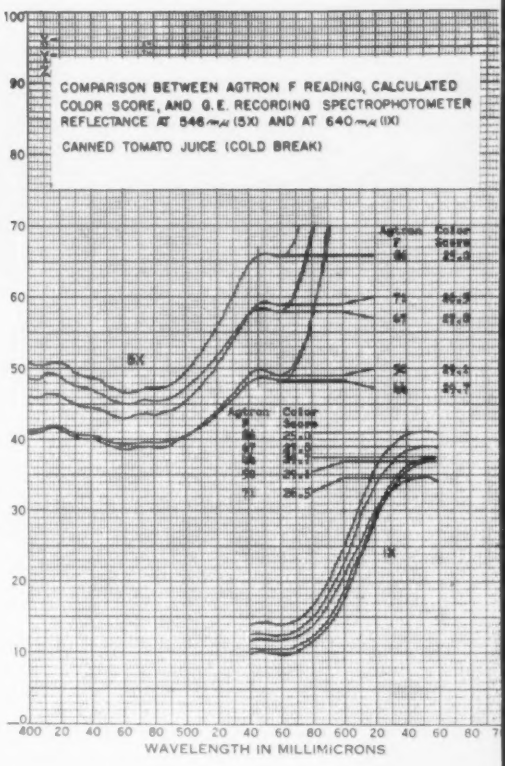

COMPARISON BETWEEN AGTRON F READING, CALCULATED COLOR SCORE, AND G.E. RECORDING SPECTROPHOTOMETER REFLECTANCE AT 546 mμ (5X) AND AT 640 mμ (IX)
CANNED TOMATO JUICE (COLD BREAK)
Agtron F
Color Score
5X
IX
WAVELENGTH IN MILLIMICRONS

Fig. 5—Chart compares Agtron F reading, calculated color score, and GE recording spectrophotometer reflectance at 546 mu and at 640 mu.

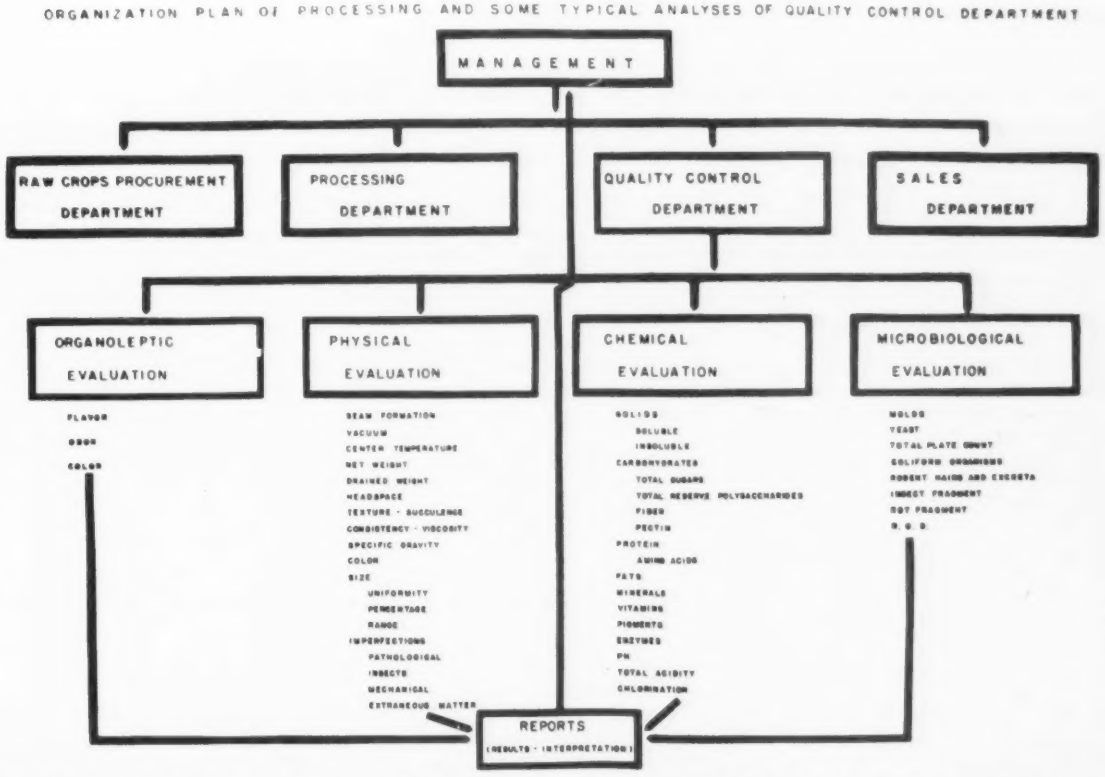


Fig. 6—Proper organization for a quality control laboratory and its place in managerial administration can be outlined as above and maintained for administrative coordination.

Studies show that the Northern Spy variety is late to start fruiting because it tends to make too much wood growth during its early years in the orchard.

Proper Fertilization Means . . .

More And Better Apples

Studies By University Of Vermont Horticulturists Result In Valuable Data For Growers.

By

Charles H. Blasberg

Department of Horticulture
University of Vermont

The nutrition of apple trees is a complex problem. Too often growers consider only the chemical elements they apply to the soil or the foliage. Actually, the environment – temperature, moisture, and sunlight – as well as most of their cultural practices, affect the nutrition of the plant. The problem is further complicated because varieties differ in response and because a mature apple tree behaves more like a *group* of individual plants than like a single plant.

I have come to look upon an apple tree as a community of competing individuals. There seems to be but little sharing of any reserve foods. Thus, the food manufactured by the leaves on a given branch does not seem to be shared with other branches of the tree, although a portion may be shared with the root system. Growers often see trees of biennial-bearing varieties where half the tree fruits one year and the other half fruits the next. This alternation of bearing usually continues until some environmental or cultural factor upsets the rhythm.

Because of the complex nature of an apple tree and because growers have little, if any, control over many of the factors involved in its nutrition, they should not be surprised or discouraged by the conflicting reports on the kind or amount of fertilizer to use. They should study their own situations and act accordingly.

From the pre-blossom period right through petal fall the orchard manager should make daily observations and notes. Thereafter, two observations each week may suffice until harvest time approaches, unless some special problem arises. Apple trees are living and constantly changing. Each variety responds to changes in the environment in its own way. Good orchard management demands an understanding of the response of different varieties to environment, cultural practices, and fertilizers.

Everyone agrees that apple trees need the same nutrients as other green plants. If any one of them is lacking, abnormal growth occurs. As a rule, when the deficiency symptoms are observed, the tree has already been severely injured and has had its crop-producing potential reduced. Growers must constantly be alert to avoid nutrient deficiencies. We need to devise some warning signals that will tell us the nutrient condition of the tree before visible symptoms appear.

Obviously, if the soil is well supplied with an available element there is no need to supplement it from the

(A paper originally printed in Better Crops With Plant Foods.)

fertilizer bag. On the other hand, every good orchard manager will have tests made of his soil and his foliage so he knows what the story is. Unfortunately, a single test is not too helpful because the situation is constantly changing. It makes a considerable difference when and where the samples are collected or if the determinations are made in a dry season or a wet season. Such analyses coupled with tree performance under known cultural and environmental conditions are, however, most valuable when it comes to figuring out just what the fertilizer program should be.

Another aid which we have used and found very helpful is indicator plants. Thus alfalfa, which seems to have a much higher boron requirement than apples, makes a good indicator of the soil's ability to furnish this nutrient. Likewise, the common milkweed seems to be very sensitive to the amount of available magnesium in the soil. It has been our experience that in orchards where magnesium-deficiency symptoms appear on milkweed we soon find it on the apple trees. I suppose we might train ourselves to use other indicator plants for other elements if we were sufficiently alert and observing. But now that we have the advantage of foliar analyses along with soil analyses, we have a more positive method of detecting deficiency symptoms before they reach the critical stage.

Lime

Because apple trees are rather tolerant of acid soil conditions, many growers have tended to neglect liming. It has been our experience that orchard management problems increase as the acidity of the soil increases. Why not give your soil the "acid test?" In Vermont, where magnesium deficiency has been a problem, we have been recommending the use of a dolomitic limestone with a high magnesium content. Through its use we aim to supply the needs of the trees for magnesium and calcium, to maintain a favorable soil pH so that the nutrient elements in the soil are more readily available to the tree, and so that the beneficial soil-inhabiting organisms have an opportunity to function normally.

Although it may be to the grower's advantage to have his orchard located on a fertile soil, the inherent fertility of the soil is less important than the physical properties. We have seen too many examples of orchards planted on poorly drained or shallow soils. On such soils the trees may make excellent growth for a few years, but after that, regardless of management practices, it's difficult, if not impossible, to get a profitable crop. The amount of money a grower must spend to maintain adequate fertility on infertile soils represents a very small portion of his total growing expense. Eliminating a particular fertilizer element to save money is indeed poor economy.

We need much more information than is now available concerning the influence one element has upon the availability of other elements in the soil. The work of Wehunt and Purvis shows that the calcium and magnesium present in the soil depress the amount of potassium in the leaves and vice versa. Likewise, they show a relationship between phosphorus in the soil and potassium in the leaves as well as the amount of potassium in the soil and nitrogen in the leaves.

In our own work we found that the same amount of nitrogen applied alone to the soil produced more terminal growth on bearing apple trees than when applied in combination with phosphorus and potassium. We had attributed this to the increased sod growth making more competition with the tree roots for both minerals and water. Some growers who have noted this same condition have disced the sod just enough to destroy some of the absorbing roots but not enough to actually kill the sod. This is, however, not feasible under all situations. Mulching would certainly temporarily check the grass competition and provide a better moisture supply. Where moisture is not a limiting factor, an increase in the rate of fertilizer application to produce the desired amount of tree growth along with the maximum amount of sod growth would be good orchard management.

Nitrogen

Most of the studies concerning fertilizers for apples have dealt with the influence of nitrogen—the regulator of plant growth. The importance of having an available supply of nitrogen during the periods of bloom and flush growth has been well established. Unless the tree has an abundant supply during these periods, the set of blossoms is likely to be low and the foliage smaller in size as well as less green. If the supply of nitrogen is limited during this early period of growth, but is plentiful during the end of the growth period, the end result is very different. In the first instance the nitrogen will be available to aid in fruit setting, to develop large leaves, and

(*Continued on Page 43*)

An efficiently and scientifically managed orchard will show a uniformity of tree growth and characteristic varietal differences in bloom. Aerial photo shows bloom variance.

Processors Can Profit By . . .

Quality Control Of Tin And Glass Containers

By
I. J. Ping
Food Technologist
Michigan State University

The progressive food packer always attempts to control the quality level of his product. It is axiomatic that the American consumer demands the products he buys to be of uniform quality from year to year. To satisfy this demand the food processor makes every attempt to obtain a raw product of uniform quality, and is able to do so within certain limits. He assumes that his containers are perfect, or at least of adequate quality, because they carry the warranty of the manufacturer.

An examination of the entire problem of spoilage, packer-loss and the determination of financial responsibility presents quite a different picture. Canned food losses are not the sole responsibility of the container manufacturer. Spoilage due to one or more faulty plant operations is often blamed on the container when it should be leveled at the right cause. In reality the packer is compensated for only that part of spoilage attributable to faulty containers.

In recent years some packers have become intensely interested in the quality level of the containers used. The variations of one lot to another and the trends in general quality level have been subjected to definite study. This interest has been stimulated by the desire of the processor to reduce his overall spoilage, breakage or other loss that may be related or traced to the container. It has, in many cases, resulted in the institution of a quality control program for containers.

Container Quality Control

A quality control program for containers, as its name implies, is a sampling, inspection and evaluation of a controlled statistical sample of each lot of containers to determine the relative quality of any one delivered lot. A container inspection program, to be of value, must be a joint project of the processor and container manufacturer.

The ultimate need for container inspection is determined by the type of product, type of process and type of container. It is greatly influenced by special problems of the process or container. For example, a conduction-heating, low acid food packed in a No. 2 can, retorted at 250 deg. F., would subject the container to considerably more stress than tomato juice that was hot-filled, closed and cooled.

Inspection of incoming containers is not an end in itself but rather a management tool. The initial inspection, to be of most value, must be correlated with spoilage, breakage, or other container failure. In certain instances it may solve problems arising from consumer complaints. The inspection program may lead to solutions of packing line problems seemingly irrelevant to the container. A slight change in a glass mold may increase or decrease the "normal plant breakage," or cans from a particular lot may look the same but "jam" more often than normally.

Container Control Program Operation

A control program may be divided into three categories: – (1) sampling, (2) inspection, and (3) evaluation. The size of the sample, for example, may be determined by referring to standard statistical sampling tables or to those of Military Standard 105-A(1). A single or double sampling procedure may be employed. In the single sample method a lot is accepted or rejected on the basis of findings in the first sample. In the double sampling method a small first sample is tested and then is followed by a second larger sample if results of the initial inspections fall into a doubtful category. A lot of 10,000 containers would, under inspection level I Military Standard 105-A(1), require an initial sample-lot of 150 containers followed by a second sample of 300 units if the double-sample method were conducted.

The inspection program for tin containers might consist of a visual inspection of the entire sample for dirt, grease, bran, oil, flux, loose or excessive solder, character of the side seam lap, inspection for droop and cut-over, and damage or defects in the enamel covering. For the physical portion of the inspection 10 per cent of the sample would be pressure-tested, then stripped and the side seam pulled open. The body hook, cover hook, seam thickness and length would be measured and the opened side seam inspected for "worm" holes.

Glass containers also would be subjected to a visual and physical test. The visual examination would include search for finish defects, such as over-pressed finish, stones, blisters, spike, check, sagged or not-filled finish, rough finish, mismatched finish distribution, and finish of round. Body defects such as blisters, adhering glass particles, checks, protruding stones, tear, blister and dirty surfaces would be noted.

Evaluation of test results must be related to the ultimate use of the containers and other factors as mentioned. The Heinz Company (Long.2) utilizes the three classes of defects listed in the accompanying table for control of glass baby food containers.

Classification of Defect	Acceptable Quality Level	Defects
Class 1 Major (minimum level)	0.065	Filaments, glass particles
Class 2 Major (render jar or contents unfit for human consumption)	0.65	Serious checks, chipped, bruised finish, stones, out-of-round finish, thin spots.
Class 3 Minor (unattractive but does not damage product)	4.0	Marks, color streaks, etc.

By adding the number of each class of defects and then referring to the appropriate Mi.Std. 105-A(1) chart the lot can be accepted or rejected.

By employing the same system of charting by class of defect it is possible for tin cans to be examined and tested in a similar manner. An example of Class 1 defects in tin cans is open laps. Class 2 defects include faulty side seams, leaky, gross faulty body and cover hook; and Class 3 covers such defects as enamel damage, droop, and cut-over, hooks not within tolerance, etc.

Thousands of "plant lines" rejected in selecting this leading bean

Kinghorn Wax Bean selections at Northrup King are painstakingly made on a "plant line" basis. These selections for basic seed stock are critically tested for high yield, good pod color, pod shape and plant vigor. Should a single "plant line" not meet the high Northrup King standards, the entire "plant line" is discarded. The remaining outstanding "plant lines" are bulked for field increase. These Northrup King selections are widely adapted to Midwestern and Eastern areas where Round Pod Kidney and Kinghorn Wax do well. The pure white seed makes Kinghorn Wax ideal for canning. Its long, smooth, round pod is very attractive.

KINGHORN WAX BEAN
FROM NORTHRUP KING

NORTHRUP, KING & CO. NK® MINNEAPOLIS 13, MINNESOTA

Twelve-Step System Assures . . .

Fast And Accurate Inventory Procedure

By
George J. Bevans
Systems Council

However efficient a plant's accounting system, everyone agrees on the necessity of reconciling its book inventory records with an annual physical check of materials and equipment actually on hand. Two different methods for taking physical inventory are widely used. One is to cover all storage areas in the course of a year by checking the stock and equipment on different floor sections each successive week. The other is to do the whole job at one time.

The advantage of this latter method is that it gives an accurate picture of the overall situation, so that all records can be reconciled simultaneously. The traditional objection to taking physical inventory of the entire plant at one time is that it interferes with, often stops, production for several days while the job is being done. Processing plants working on a seasonal basis, of course, need not concern themselves with this factor.

But now a method for taking inventory in almost any size plant in a single day has been perfected by Gene H. Kline, a top accounting executive with General Foods Corporation. This system was developed over a period of years for a number of large and small companies in various fields.

Twelve-Step Plan

The complete, recommended procedure embraces only 12 simple steps.

(1) Draw a simple, concise diagram of each floor area to be inventoried. Have sufficient copies made so that each of two counting teams, to be appointed for every area, may have a copy, at least for that section of the floor for which they will be held responsible. Additional copies should be run off for supervisory use and in case of mislaid copies.

(2) Divide manpower available for the actual counting into two-man teams. Draw up an assignment sheet showing the areas each team is to count or inventory. (Provide for each area to be counted twice by *different* teams. This makes for accuracy.)

(3) List all classes of items to be counted in each area and indicate how each class is to be recorded; i.e., pounds, barrels, cases, gallons.

(4) Select a two-man team to supervise the counting in each area or group of areas. Usually each supervisory team should consist of the foreman, who supervises that section of the plant, and an accountant to work with him.

(5) Have an established manufacturer of patched system tags supply a quantity of tags sufficient to permit recording on a separate tag the quantity of each different class of material or items found stored in each separate area to be inventoried. (An accepted model for this tag is reproduced here. These tags should be prenumbered in sequence.)

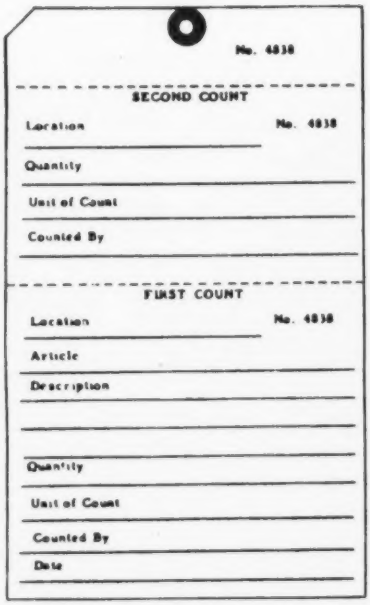
(6) Give to each supervisory team a quantity of tags sufficient for the counting teams assigned to the areas under the supervisory team's direction. Record those tag assignments by numbers on an inventory tag control schedule. Explain to all concerned that every tag issued *must* be accounted for.

(7) Prepare and issue lists of counting instructions for the guidance of each supervisory team and for all counting teams.

(8) Hold a meeting with the supervisory teams, going over with them your typed mimeographed counting instructions in detail.

(9) See that supervisory teams hold a similar meeting with the counting teams under their direction.

(10) As early as possible on the day selected, start the actual count. (If tags assigned to a supervisory team prove insufficient, do not allow team to borrow tags from other teams. Insist that they obtain any needed additional tags from a central control supply. This is to assure that tag numbers may be properly recorded on an inventory tag control schedule.)



An inventory count tag based on this model makes the job of inventory taking simple and accurate.

(11) The first counting team counts an area and should attach a tag to each commodity counted, fill out the lower section of this tag, tear off the stub and turn it in to the supervisory team for that area. The second counting team records its inventory figure on the second section of the tag, tears this stub off and turns it in to the supervisory team. The supervisory team should require that the numbers on the tag stubs turned in by the second team correspond exactly with the numbers on the tag stubs turned in by the first team.

(12) The accountant on the supervisory team should check the inventory figure on each tag stub turned in by the second team against the figure on the corresponding stub turned in by the first team and reconcile variations. No erasures should be permitted. The accountant may classify by a symbol, on the tag recording the first count, the nature of the material counted; eg., raw material, material in process, or finished commodities. All adjustments in figures should be made on the tag stubs used for the first count. Thus, only those stubs may be considered in the final tabulation made by the counting department, to which these stubs should finally be routed from the control center.

The advantages of this simple system for taking physical inventory are that (1) it yields records which are highly accurate; (2) fixes responsibilities for errors; and (3) makes the actual counting work relatively easy for participants.

Everybody benefits from Swift's EASY OPEN case sealing adhesive because it seals fast, seals efficiently, but opens easy!

Your Production Benefits because Easy Open goes on in a smooth, even film. Busy stores tend to handle an easily opened case first. So, *Your Customer Benefits* because you've made his job easier; and *You Benefit* because your product moves quickly on and off the shelf.

Check over the characteristics of Swift's EASY OPEN Case Sealing Adhesive outlined at right, compare them with those of any case sealer you may now be using, then write for a trial quantity. You'll be glad you did when you can add EASY OPEN to the list of your selling points for your product. Remember, too . . .

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS

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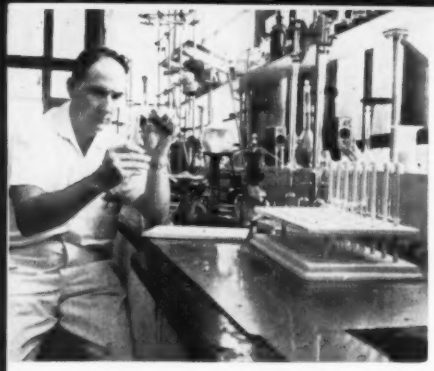


Quality control is an important factor in Durkee's improved Worcestershire sauce.

Durkee's New Sauce

Gold foil sleeves dress up sauce bottle thus giving it eye appeal.

An Age-Old Recipe Brought Over From England Has Been Fitted Out In American Style And Dressed To Appeal To The Buying Public.

An improved Worcestershire sauce, which approximates the original produced in Worcester, England, centuries ago, has been placed in national distribution by Durkee Famous Foods, Cleveland.

Produced after considerable study and research, the new sauce is a blend of flavor and zest of many spices and seasonings designed to produce appetite-tantalization at the dinner table. It is manufactured by Durkee's Elmhurst (Long Island) plant and distributed by all Durkee divisions.

In introducing the new sauce, Durkee made a complete change in packaging the product. Dressed with a distinctive gold foil sleeve, with deep blue ink as an overprint, the new package has an outstanding appearance.

The bottle is topped with a plastic shaker top fitment to prevent dripping, and is sealed with a dark brown plastic screw-top closure. In addition to the sleeve label, a white and blue label is pasted on the bottle itself.

Ingredients And Process

Durkee's new sauce is a blend of soy sauce, distilled vinegar, lemon juice, onions, garlic, anchovies, orange marmalade, tamarinds, and sugar. Last, but not least, Durkee's own blend of spices and herbs are added to the batch which is cooked in 300-gal. stainless-steel steam jacketed tanks. The mixture is then put into cypress storage tanks and aged under air agitation until the flavors are completely blended. Then the straining process occurs and the product is ready for the filling line.

All ingredients are examined by the quality control laboratory to achieve perfection in flavor and consistency of the finished product.

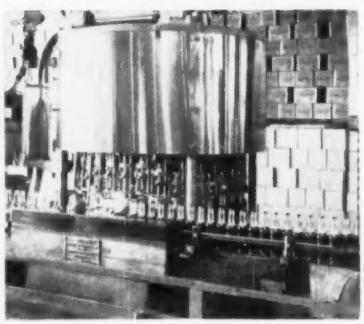
Filling line equipment includes an unscrambler of Island Equipment Company, New York; 16-head bottle cleaner and 33-head rotary vacuum filler, by U. S. Bottlers Machinery Company, Chicago; capper by Consolidated Packaging Machine Corporation, Buffalo; and automatic labeler by Norton Company, Worcester, Mass.

Basic plastic fitments and closures are furnished by Owens-Illinois Glass Company, Toledo; body labels by William Fitzhugh & Company, Brooklyn; and foil sleeves by Continental Bag Company.

History Of Sauce

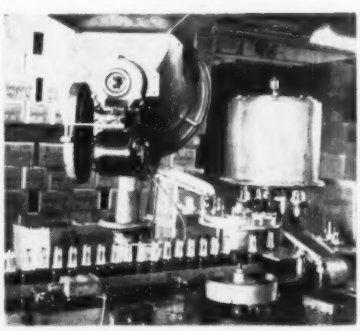
Company officers point out that the name "Worcestershire Sauce" is accepted by present-day gourmets with little thought to its history. Worcester, seat of Worcestershire County, is located 120 mi. north of London, and was founded in 679 A.D.

Among the early industries of Worcester were the arts of wine- and vinegar-making, which eventually led to the processing of Worcestershire sauce. It is well known that traffic in spices from the Orient was once a major business operation. New paths of commerce were continually opened to obtain exotic products of the Far East and eventually these products were wedded to vinegar and wine vinegar to obtain a new product, which in those early days became known as Worcestershire sauce.



A 33-head automatic filler helps package a new product.

More than a century ago, E. R. Durkee, founder of Durkee Famous Foods, came to America from England with his own formula of the famous sauce, and a broad knowledge of spices which he used in the development of earlier formulas for salad dressing.



Plastic screw-top closures add to bottle appearance.

Packaging Shows

At Atlantic City's Great Convention Hall, we shall be glad to discuss the most important of Packaging Shows . . . **THOSE IN THE HOME.**

At Hazel-Atlas, designers, engineers, representatives, chemists, production and quality control men all work with but one thought in mind . . . that H-A containers must move your products off the shelves into the home. There's where good packaging shows best.

That's why we say **means Home Approved**

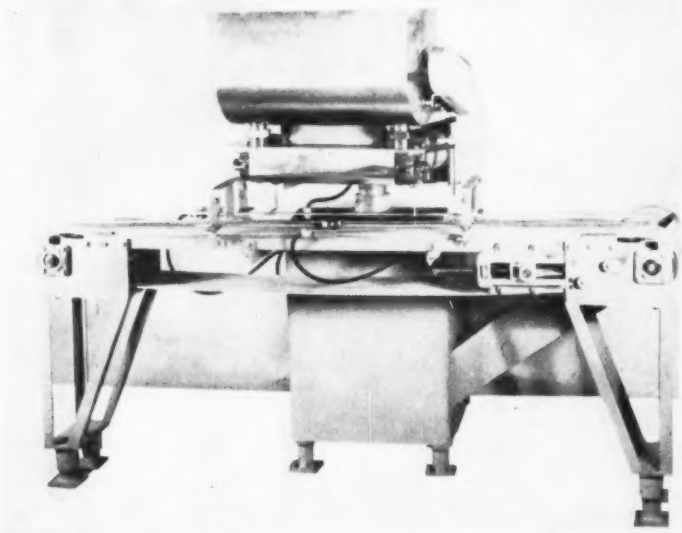
HAZEL-ATLAS GLASS COMPANY WHEELING W. VA.

There is a ***HAZEL-ATLAS*** *factory or sales office near you*

What's New?

Supplies • Equipment • Trade Literature

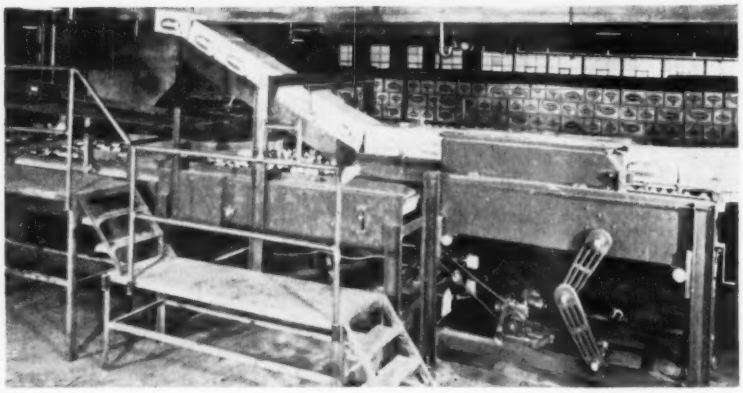
Filler For Small Canners



A new two-station straight line piston filler has been introduced by the Pfaudler Company, Rochester, N. Y.

Feature of the twin filler is ease of dismantling and speed in cleaning. It will handle multiple size cans, jars and cartons, ranging from 4 oz. to a gallon. Filling speed, according to the manufacturer, ranges from 25 to 50 containers per minute, depending on container size.

Efficient Unloader-Unscrambler



Cans come in order

The A-B-C Packaging Machine Corporation, Tarpon Springs, Fla., and Quincy, Ill., is now producing an empty can unloader and unscrambler with an exclusive patented unloading mechanism. Flaps of boxes are automatically opened and cases gradually raised by two take-off channels. Empty cases are automatically turned upright and move toward packing areas. Cans are conveyed through a separating mechanism that channels and spaces them onto a series of moving belts with guide rails.

Dozen Counter

J. F. Visin Production Instrument Company, Chicago, comes to the aid of packers with an electrically controlled dozen counter. Dozens are counted and registered up to 1,000 counts per minute. It shows dozens as well as less-than-dozen units counted. The counter is actuated by electric impulses, the same as other counters. It is available for practically any voltage up to 120 AC or DC.

Twelve at a time

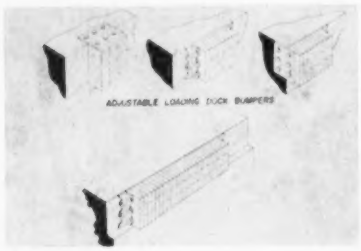
Bantam Size Vibrator

The Vibrolator SAH-10, a bantam-sized air or steam-operated vibrator is a recent development of the Martin Engineering Company, Neposset, Ill. It weighs only 4 oz. Frequency of vibration is variable from zero to more than 50,000 CPM. It is self-starting, self-cleaning and sparkproof.

Small but mighty

Loading Dock Bumpers

Flexo-Loading dock bumpers, constructed of rubber coated fabric and designed to minimize dock damage, have been placed on sale by Bumpers, Incorporated, Cleveland, Ohio. They are made to cover a facing depth of 6 to 12 in. The rubber will remain resilient in any climate.



Save loading costs

New Filler

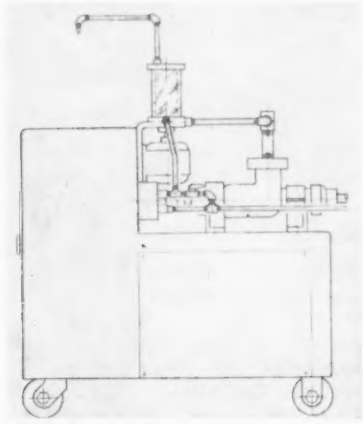
A newly designed filler called the Simplex, which meters exact amounts of liquids and semi-solids, is now being produced by F. L. Burt Company, San Francisco. The machine fills 30

Reduces filling costs

containers per minute, metering 1-3/4 oz. to as little as 3/4 oz. According to the manufacturer, it is easily disassembled for cleaning.

Makes Mixing Accurate

A new system of proportioning, mixing and dispensing two liquids in the same operation has just been announced by the Diehl Mateer Company, Strafford-Wayne, Pa. The system, according to the manufacturer, provides an adjustable means of



Fluids flow evenly

accurately controlling the volume of the mixture dispensed while maintaining ratio or proportion. This is accomplished by a common drive for both metering pumps and using the Mateer principle for controlling cycle.

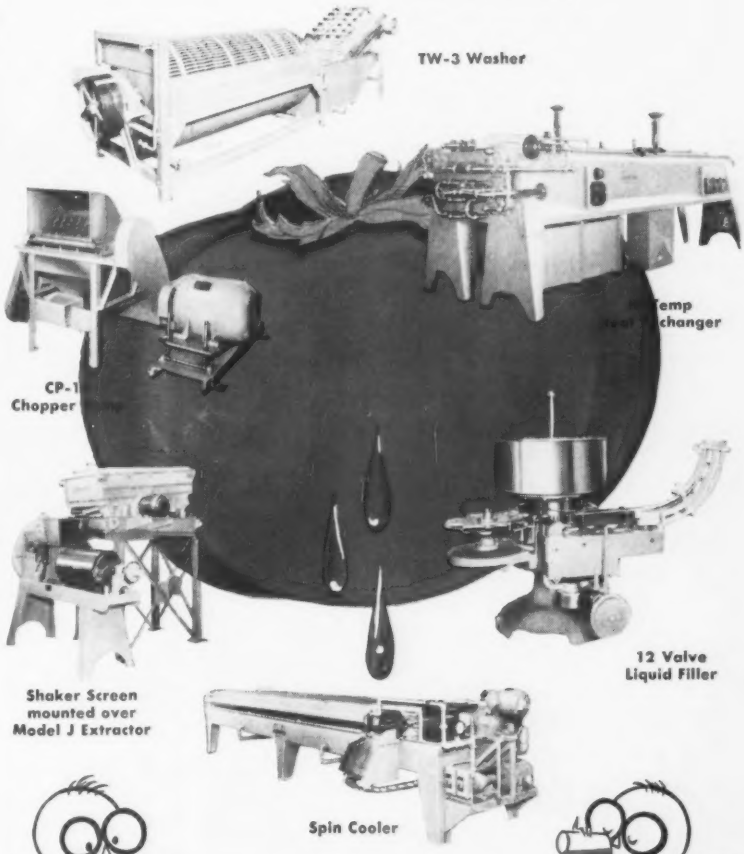
(*Continued on Page 50*)

For Quality and Economy

COMPLETE TOMATO JUICE LINE

by CRCO*

*SAY "SEE-A-R-CO"



FROM RAW PRODUCT...
...TO FILLED CONTAINER
you get fast, sanitary and economical processing every step of the way.

Every piece of equipment in CRCO's Complete Tomato Juice Line is engineered to process better, cleaner and faster. They add up to more profit for you. Write for complete data.

THE BEST OF Everything

CHISHOLM-RYDER CO. INC.
Niagara Falls, New York
FOR THE FOOD PROCESSOR

(Continued from page 41)

be made by the employer at the end of the work-week, and at that time the type of exemption must be entered on the payroll. The records must also show each work-week during which the plant is operating under a 14-week exemption and a notice of the exemption must be publicly posted.

Area of Production Exemption

The "area of production" exemption provides that employees engaged within the area of production in canning commodities for *market* are exempt from both the minimum wage and the overtime provisions during the entire year. As mentioned before, this exemption does not apply to freezing and other first-processing operations on fresh fruits and vegetables.

Mere employment within the area of production is not enough to bring the employee within this exemption. He must be engaged in canning operations, and the employer must can his products *for market* in order for the exemption to apply. The canner's office help or his custodial and maintenance employees who do not actually engage in canning, are not within the area of production exemption.

Employees of a cannery are considered employed in the area of production if the establishment fulfills two qualifications: – (1) the cannery must be located in the open country or in a rural community, and (2) at least 95 per cent of the fruit and vegetables processed must come from "normal rural sources of supply" located not more than 15 airline miles from the plant.

These standards are defined in terms of mileage and population. "Open country and rural community" does not include cities, towns or urban places having a population of 2,300 or more, nor any areas within certain distances of cities and towns having specified population limits.

Specifically, a cannery is in open country or rural community if it is more than one mile from any city, town or urban place having a population of 2,500 or over; more than three miles from such a place with a population of 50,000 or over; or more than five miles from a locality with population of 500,000 or over. Population figures must be those of the latest available United States census.

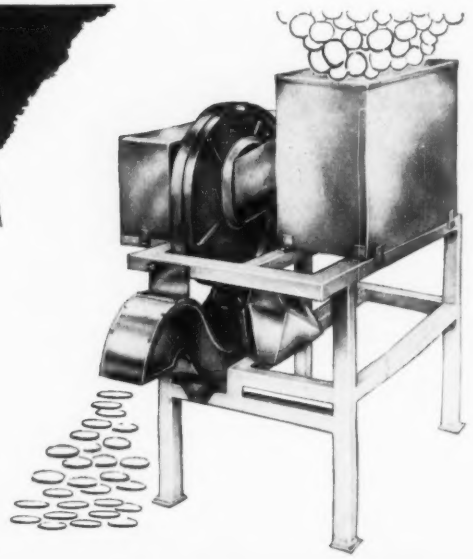
Commodities are considered to come from "normal rural sources of supply" if they are received from farms and from farm assemblers or other establishments through which the commodity customarily moves, which satisfy the distance and population requirements. If it can be demonstrated that commodities which come from farm assemblers or other establishments *not* located in the open country or in a rural community were produced on farms within 15 miles of the cannery, the commodities are considered to come from normal rural sources of supply.

Regulations also require that 95 per cent of the fruit and vegetables come from within 15 miles of the plant.

The five per cent tolerance is allowed in the regulations and may prove useful to the plant operator who receives occasional shipments from farmers not within the stipulated area.

All the exemptions applying specifically to the canning industry as such have now been analyzed. However, a word of caution: – remember that an employee who engages in both exempt and non-exempt work during any workweek is not entitled to exemption during that week.

Looking for *Quality* BEET SLICES?



the Urschel Model "Y" Beet Slicer produces them smoother, more uniform than ever before!

★ Lowest possible maintenance—only one revolving shaft.

★ Complete slice size changeover in one minute, with extra knife assembly.

★ Cuts 6/32", 7/32" and 9/32" slices.

★ Ruggedly built for dependable operation season after season.

★ Uses less than 12 sq. ft. floor space.

Consult Urschel now for the experienced answers to your cutting problems. Write:

PRECISION HIGH-SPEED FOOD CUTTING EQUIPMENT

URSCHEL LABORATORIES INC.
VALPARAISO, INDIANA

manufacturers of precision, high speed cutting equipment for delicate food products

(*Continued from Page 33*)

Urea may be used in concentrate sprays up to 4X with but little danger of foliage injury. It is highly compatible with present day pesticides.

to initiate the development of a new set of flower buds. Nitrogen made available to the tree after these growth stages will tend to encourage the development of longer terminal growth, delay maturity, and interfere with the development of high fruit color.

Nitrogen in one form or another was long considered the only element the grower needed to apply to the soil around his apple trees. Many thought that because of the extensive root system which was constantly reaching out into new areas of the soil, apple trees could obtain sufficient amounts of all the minerals without supplementary applications. Such has not proved to be the case. It is true that on favorable soils apple roots penetrate to considerable depths and extend for long distances from the trunk of the tree. Nevertheless, application of nitrogen to encourage extensive growth and to promote high fruit yields causes the tree to make an increased demand upon the soil for all of the elements needed for normal development. When the supply of nitrogen is lacking or limited, the tree makes little new growth and little demand upon the soil for the other elements. Such a situation, although it is not particularly harmful to the tree, is not modern commercial apple production. Our goal is to obtain the maximum production per tree of fine-colored, high-quality fruit. To do this we must supply not only nitrogen, but also make certain that all the elements needed by the tree and the fruit are available.

Some varieties, particularly Northern Spy, make an excessive amount of wood growth during the early years in the orchard. On such varieties the amount of nitrogen applied should be reduced and the pruning kept at a minimum until the fruiting habit has become established. We sometimes suggest to Vermont growers that once they know about how much nitrogen they must apply to their McIntosh trees, Delicious will need twice as much, whereas Northern Spy will need only one-half the amount.

Foliar Sprays

Since a number of research workers have demonstrated that apple trees could assimilate nitrogen applied to the foliage, the Horticulture Department of the Vermont Agricultural Experiment Station has been studying the value of urea foliar sprays in the production of McIntosh apples. Results of these experiments, in progress five years, are truly phenomenal. Total fruit yield, size, and fruit color have been better on the trees receiving the foliar sprays than on the trees receiving the conventional soil application of nitrogen. Most Vermont apple growers have been applying urea foliar sprays with much success. This past season, because many orchardists switched from the ground application of pesticides to dusting from the air, they were forced to return to the conventional system of nitrogen application to the soil.

Control Factor

One of the reasons foliar application of nitrogen has been so successful is that it gives the grower more control over the nitrogen available to his trees. Soil applications of nitrogen are available to the tree only when soil temperature and moisture conditions are suitable. Foliar-applied nitrogen is available even though soil temperature and moisture conditions are unsuitable. Still another important point favoring foliar application is that its influence is quickly dissipated. The applications can be made early to assure an abundant supply of nitrogen for fruit set, leaf development, and fruit bud initiation and fruit size, and then discontinued so that only a moderate supply remains during the period of fruit coloration. Urea has been found to be highly compatible with present-day insecticides and fungicides.

Phosphorus

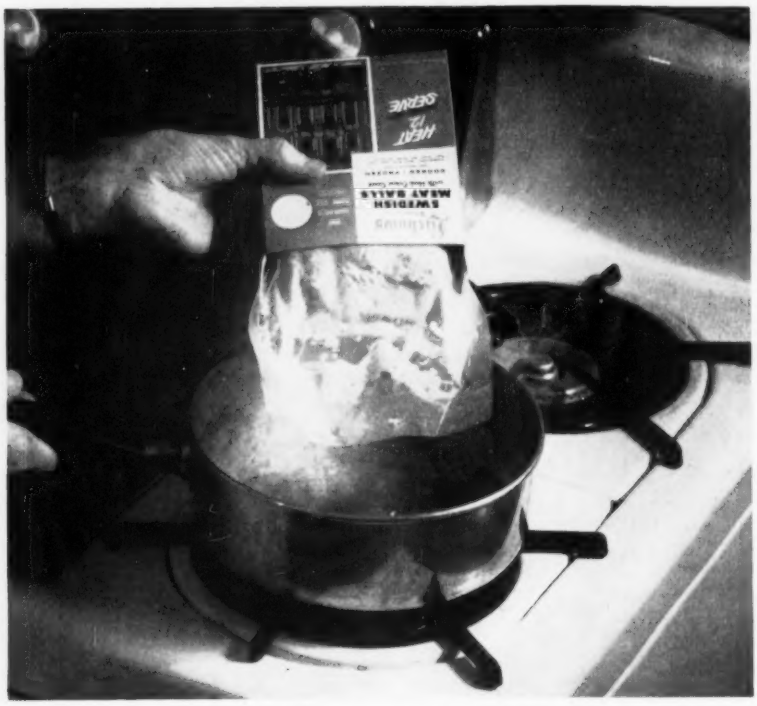
Although it is known that apple trees require phosphorus, a deficiency of this element has not been observed on mature trees in the orchard. We favor its inclusion in the fertilizer program because it does benefit the sod cover and thus helps to improve the fertility as well as the physical condition of the soil. We have a suspicion that phosphorus in some way aids root development and have always added some to the bottom of the hole when planting a young tree. We are confident that as time goes on we will learn of additional benefits from the application of phosphorus.

Studies along these lines are being planned and will get underway as soon as conditions warrant. Reports thereon will be released when results are available.

An orchard in bloom serves as a magnet of beauty to visitors.

Freezing News

Promotion • Selling • Research



Frozen Food Heated In Own Plastic Bag

A New York City restaurant – Luchow's – has introduced a new line of pre-cooked frozen meat dishes, unique in that they can be heated in the same plastic bag in which they are packaged. Defrosting is unnecessary, so a meal can be prepared in jiffy time. And since the food remains inside the plastic bag until ready to serve, there is no pot to clean.

The convenience features of the new line are made possible by a plastic bag made with "Mylar" polyester film, a product of E. I. du Pont de Nemours & Company. Reported to be strongest of all plastic films, Mylar has an operating temperature range of from minus 80° to plus 300° F., and is unaffected by the abrupt shift from freezer to boiling water.

Preparation is simple. After removal from the refrigerator, the bag is taken out of the carton, dropped into boiling water and left there for 12 min. Then it is lifted out by snagging one of the eyelets with a fork or skewer or with kitchen tongs, cut open and the hot food is served onto the plate.

Entrees now available are beef goulash with noodles, Salisbury steak with mushroom sauce, and Swedish meat balls in herb sauce.

Birds Eye Installs New Pie Line

The board of directors of General Foods Corporation has approved the installation of a pie line in the Birds Eye Division plant in Pocomoke, Md.

The new pie line will have a capacity of around 12 million pies a year, it was revealed. The equipment will be installed in the next few months and actual production is expected to begin this summer.

Chinese Soups Packed In Cans

Temple Frosted Foods, Incorporated, packer of frozen Chinese foods, introduced frozen Chinese soup in cans at the National Frozen Foods Convention, held recently in New York. Won-ton and chicken egg drop soup are the two varieties thus far packaged by the firm.

Freezers See Increase In 1956 Volume

Production increases ranging from 7 per cent to as high as 40 per cent over 1955 output are predicted by major perishable food firms in a report just published by the National Association of Refrigerated Warehouses.

The report, entitled "The 1956 Business Outlook for Public Refrigerated Warehouses," shows the "pacesetters" to be the frozen food producers. Continuing their dramatic growth, almost all frozen food firms reporting foresee increases in their 1956 volume.

The National Association of Frozen Food Packers said that "volume of frozen foods should increase somewhere between 15 and 20 per cent with the greatest percentage increases in meats, meat pies, and other specialty items."

Frozen food distributors, according to the National Frozen Food Distributors Association, expect a 10 to 15 per cent across-the-board increase in sales as compared to 1955. NFFDA pointed out, however, that it expects the largest of the seasonal packs – orange juice – to be held down by a short crop in Florida, and 1956 orange juice sales will be only slightly ahead of 1955.

●

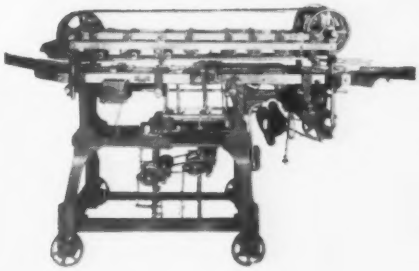
Fresh Frozen Cherries In New Consumer Pack

Goldman Foods, Incorporated, Sturgeon Bay, Wis., is now distributing its fresh frozen Wonderland cherries in No. 2 size consumer containers produced by American Can Company.

Previously Goldman packed red tart pitted cherries only in bulk 10- to 30-lb. metal containers with slip covers.

Goldman reports the product is delicious as breakfast fruit, dessert, ice cream topping and as a pie filler.

BURT brings Non-Stop Labeling to Your Line!



A Burt machine can bring non-stop labeling to your line. Uninterrupted service from opening to closing of each operating period eliminates time loss . . . speeds up the flow of shelf goods. *Dual label feed* increases efficiency . . . does not rush the operator.

EXCLUSIVE FEATURES!

Auxiliary feed fingers which function from both sides of the label to insure uniform label position, with no disarrangement of the label pack!

"Burt Beats Fleeting Time"

BURT

LABELERS • PACKERS

BURT MACHINE CO.

401 E. Oliver St. Baltimore 2, Md.

SPEAS

APPLE PECTINS

Standard of Quality for 30 years

- **NUTRL-JEL** Regular and Slow Set. } For Preserves, Jams, Jellies and Marmalades
- **CONFECTO-JEL** For Jellied Candies — Ready to use.

BETTER JAMS

Jellies and Confections Because . . .

1. *Wide pH Range*
2. *Uniform Strength*
3. *Neutral in color and flavor — blends naturally with more different fruits than any other pectin*
4. *Makes jams & jellies with an even, smooth texture (never grainy) and improved spreadability*

For full information, technical advice, and formulas write Dept. F-4

Plants in Apple Regions From Coast to Coast Assure Dependable Supply

SPEAS COMPANY, GENERAL OFFICES, KANSAS CITY 20, MISSOURI

The Market Place

News of Promotion & Selling

Relying on the visibility of glass to display the full color and texture of the product, Libby, McNeill and Libby packaged a part of the 1955 crop of Royal Anne and black cherries in No. 303 jars made by Owens-Illinois Glass Company.

ReaLemon To Launch Record Ad Campaign

A new promotional campaign which is expected to overshadow its previous national advertising campaigns has been announced by ReaLemon-Puritan Company.

The 1956 plans involve four major media. National magazines will be used as part of a long range educational plan to familiarize the consumer with ReaLemon lemon juice and its many uses. Local newspapers in selected markets are also scheduled.

Real Gold Wine Vinegar Introduced

The Real Gold Company has announced its newest product – a 60-grain wine vinegar available in three consumer-favorite flavors.

Packaged in a 12-oz. Florentine gift decanter, the product features a special non-slip overall embossing and flat sides for easy handling and elimination of breakage in home and store. Each reusable bottle of the wine vinegar will carry a complete home economist-written booklet containing the world's leading salad recipes.

Real Gold expects to give its new product the biggest national promotion ever accorded a wine vinegar.

(Continued on Page 48)

GREEN CROP LOADER

Use genuine

HUME REPAIR PARTS

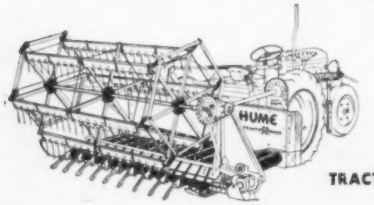
. . . there's a DIFFERENCE your Hume machine knows

Genuine Hume repair parts are identical in quality to the original — made by the same manufacturer to exacting high standards to assure proper fit, long life and a minimum of costly downtime.

Accept no less. Ask for — insist on — genuine Hume Repair parts.

H. D. HUME COMPANY
Specialized Farm Equipment
Mendota 1, Illinois

HUME



TRACTOR-ROWER

Sales Branches:
HUME PRODUCTS CORP.
Mechanicsburg, Pa.
Beaver Dam, Wis.

How to Improve Your Packaging Operations..

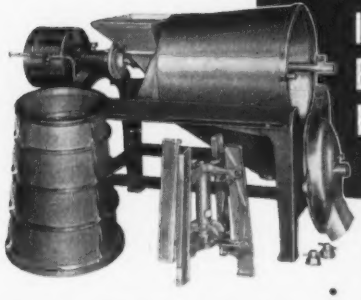
SEND FOR the new Paisley 4-page Packaging Adhesive Guide. It contains valuable information about the most modern Adhesives ever designed for specific sealing operations *in the packaging field!* Also gives facts on Technical Service Bulletins, our scientific laboratory control methods of manufacture and the Paisley Adhesive Operation Data Sheet. All this valuable information and service is FREE. Ask for your Packaging Adhesive Guide today!

SEND FOR FREE COPY NOW!

PAISLEY PRODUCTS INCORPORATED
Division of MORNINGSTAR, NICOL, INC.

630 WEST 51st STREET, NEW YORK 19, N.Y. • PHONE COLUMBUS 5-2860
1770 CANALPORT AVENUE, CHICAGO 16, ILLINOIS • PHONE CANAL 6-2219

Manufacturers of Gluers, Paints, Resin Adhesives, Cements and Related Chemical Products



INDIANA E-Z ADJUST PULPER

the only pulper you can adjust INSTANTLY for quick, POSITIVE quality control

A simple turn of the adjusting wheel provides any degree of pomace you want . . . wet or dry . . . while the pulper is in operation! Wheel changes clearance between paddles and screen *instantly*.

Built for heavy duty, peak load service with a minimum of upkeep. Capacities up to 40 tons per hour. All parts easily accessible for thorough cleaning. For use with tomatoes, pumpkin, sweet potatoes, berries and all kinds of fruit. Ideal for baby foods.

Make 1956 your modernization year!

F. H. LANGSENKAMP CO.

227 East South St.
Indianapolis 4,
Indiana

Improve . . .

• PERFORMANCE
• EFFICIENCY
• ECONOMY

SCOTT EL-200 SEPARATING UNIT

AVAILABLE in a wide range of sizes with a screen mesh for virtually every commodity. Durably constructed of the finest materials and equipped with our specially designed, quickly interchangeable rod screens.

All Scott Separating Units complete with fresh water spray and drain pan.

Write Today *for complete details on the entire Scott Viner line of food processing equipment*

THE SCOTT VINER CO.
1224 KINNEAR RD., COLUMBUS 8, OHIO

Drained Weight Scale is Fast and Portable

Specially designed for field inspectors' work and for use in canneries. Equipped with carrying handle and lever locks to stabilize lever while the scale is being transported. Features visible fractional-ounce indication for fast reading, and hydraulic damping mechanism to bring indicator to rest quickly. Has stainless-steel ring commodity pan. Carrying weight, unloaded, 32 pounds. Capacity, 12 pounds. Write for complete information on Model 347 USDA.

EXACT WEIGHT Model 213

Standard of the food packing industry. Weighs accurately in out-of-level position. Magnified fractional ounce indication. Available in straight tower or slant tower—rated capacity 3 lbs.

Exact Weight Scales

Better quality control
Better cost control

THE EXACT WEIGHT SCALE COMPANY

918 W. Fifth Avenue, Columbus 8, Ohio

In Canada: P. O. Box 179, Station S, Toronto 18, Ont.

How much is the best tomato disease control program worth to you?

Whatever you're paying for a disease program, the chances are it's not too much.

A recent study in a major tomato-producing state showed that the best disease-control program represents less than 5% of the total cost of producing the crop. Yet, this same study showed that a few extra dollars for spray or dust was one of the main reasons why some growers make money while others only break even or lose money!

Your crop can show a greater return if you give it the very best of protection. That protection is with Du Pont "MANZATE" maneb fungicide, the nearest perfect tomato fungicide yet discovered!

If you're not already using "MANZATE," better switch to this program. It will help you grow more tons per acre of the best-quality tomatoes.

On all chemicals, follow label instructions and warnings carefully.

HOW TO USE "MANZATE"

1. Start early . . . within two weeks after the first fruit has set, to prevent early anthracnose infection.
2. Use three pounds per acre or in accordance with local recommendations, regardless of the gallonage sprayed per acre.
3. Spray at 7- to 10-day intervals to protect against anthracnose at all times. It will also keep the leaves alive and green by protecting against early blight, Septoria, gray leaf spot, and late blight. Healthy leaves mean larger fruit and less susceptibility to anthracnose.

DU PONT
REG. U. S. PAT. OFF

MANZATE®
MANEB FUNGICIDE

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Market Place

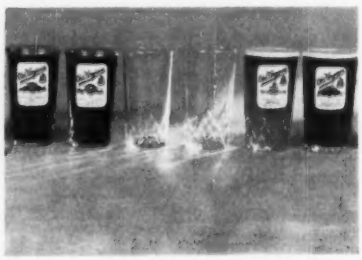
(*Continued from Page 46*)

Alexander & Baldwin Announces New Product

Alexander & Baldwin, Ltd., Honolulu, Hawaii, announces a new King of Hawaii brand product – pineapple pie filling. Label is designed and printed by Muirson Label Company, Inc.

Old Virginia Line In New Tumblers

The Old Virginia Packing Company, Front Royal, Va., is packaging its line of jelly and preserves in new, reusable, pressed tumblers. Packed in 10-oz. tumblers are apple grape, apple



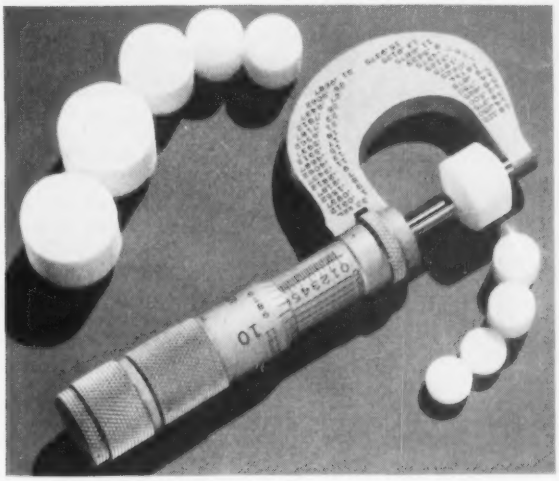
raspberry and apple cherry jellies. The 12-oz. tumblers contain pineapple, damson and blackberry preserves. Tumblers are by Jeannette Glass and Brockway Glass; caps by White Cap.

Orchard Gold Packages Redesigned

A decorative label adds sales appeal to the Orchard Gold line of the Opperman Fruit Products Company, Birmingham, Ohio. Both the pasteurized apple juice and the cider packages were redesigned. Closures are by Crown Cork & Seal Company, Inc.; glass by Knox Glass Company.

Protect product flavor with . . .

Scienco Salt Tablets



Constant Quality Control Insures Unvarying Weight, Measurement, and Purity

Salt—the right kind and the right amount—is your best guarantee for flavor control. That's why top quality houses use Scienco Salt Tablets.

Accurately made for your needs under continually controlled precision production methods, Scienco Salt Tablets contain the exact weight of high-purity Morton '999' Salt you want for accurate flavoring. Available in 10-grain to 400-grain sizes, Scienco Salt Tablets end hit-or-miss salt depositing . . . make it possible for you to order Morton Salt blended to your own specifications with other ingredients—calcium chloride, MSG, etc.

For faster, more accurate salting

Cut labor costs with a Salt Tablet Depositor. Automatically deposits a Scienco Salt Tablet in as many as 700 cans a minute! Guarantees accuracy—works on a "no can, no tablet" and a "no tablet, line stops" basis.

For more information write:

SCIENTIFIC SALTING COMPANY
Division of
MORTON SALT COMPANY
Dept. FPr-4, 1530 Hadley Street, St. Louis 1, Mo.

CANNERY SANITATION

How to guard against "Swells" and "Flat-Sours"

Bacteria, of course, are the primary cause of "Swells" and "Flat-Sours". Your equipment can be the breeding place for these bacteria. Therefore, proper disinfecting of all equipment is the key to uniformly high quality food products.

For many years, leading canners have depended on Diversol CX as the basic product in their sanitation program. This unique Diversey formula (1) cleans, (2) disinfects and (3) de-odorizes, in a single application. The unusual penetrating action of Diversol CX cuts through film to kill bacteria that otherwise might cause "Swells" and "Flat-Sours".

Protects costly equipment

And, Diversol CX is non-corrosive and will not harm equipment.

Diversol CX is recommended for safe, thorough cleaning and disinfecting of tanks, pipes, mixers, fillers, presses, benches, tables and all other equipment that may come in contact with food. It effectively destroys mold contamination and, milder solutions, make a safe employees' hand rinse. Diversol CX crystals are color-coded pink for easy identification.

Specialized sanitation counsel

For expert help on your sanitation problems use the services of your Diversey D-Man. Without cost or obligation he will be glad to give you a demonstration of safe, economical Diversol CX, and to recommend a complete sanitation plan for your plant. Or write The Diversey Corporation, 1820 Roscoe Street, Chicago 13, Illinois.

Insure Uniform Quality Cooking

DOUBLE-CHECK with COOK-CHEX

The Easy-To-Use Cooking Indicator Tag

When a Cook-Chex is attached to a retort basket . . . *Anyone* in your plant can double check, at a glance, *two important* facts!

1. **The basket has, or has not, been through the cooking process.**
2. **It has, or has not, been subjected to proper cooking conditions.**

These two facts are important to you because they eliminate the usual problems of: a wrong cook schedule, keeping baskets in sequence, and the possibility of "losing" uncooked baskets!

Easy-to-use Cook-Chex signal these essential facts automatically! Cook-Chex, produced with a *purple* chemical ink, turn color to *green* only after your proper cooking conditions have been achieved. Cook-Chex react to precise conditions of temperature, steam and time; and, may be ordered to meet your specific cooking requirements.

Cook-Chex are also excellent as a low cost, permanent record for your cooking-room operations.

Double-check with Cook-Chex to insure uniform quality in your food products. Send for supply of Cook-Chex samples.

ATI COOK·CHEX

Another product by ASEPTIC-THERMO INDICATOR COMPANY

Aseptic-Thermo Indicator Company
11471 Vanowen St., North Hollywood, Calif.

Please send a FREE supply of Cook-Chex for use with a cooking process of _____ degrees F., for _____ minutes. FP-4

Name_____

Position_____

Company_____

Address_____

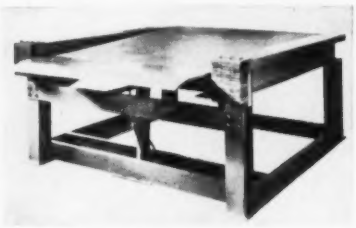
City_____ Zone_____ State_____

What's New?

(Continued from page 41)

Adjustable Dock

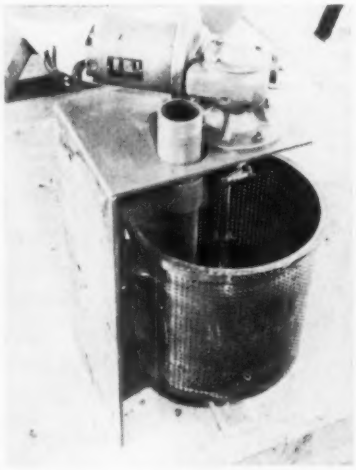
A packaged hydraulic dock leveling device has been introduced by Rowe Methods, Incorporated, Cleveland. It has a capacity of 10,000 to 20,000 lb. and comes assembled ready for placement in front of dock and subsequent wiring. Model illustrated is 8 ft. x 8 in. long by 6 ft. wide. Raising and lowering is controlled by push button. It also has a floating feature which provides a smooth, level, adjusting series.



Adjusts to truck beds

Centrifugal Screener

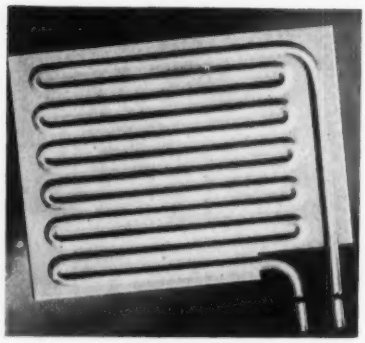
The Patterson-Kelly Company, East Stroudsburg, Pa., has introduced a new p-k centrifugal screener. It is of perforated steel with an enclosed bottom. The screen's basket forces away solid particles in suspension by centrifugal force, allowing clear fluids to be pumped through the basket and delivered to reclaimers.



Facilitates reuse of fluids

Platecoils Aid Heat Transfer

A new line of Platecoils featuring serpentine construction and "at-top-connections" is now available from Tanter Manufacturing Company, Lansing, Mich.



Efficient temperature transfer

The plate replaces pipe coils and consists of two embossed metal sheets to provide a preformed channel for flow of cooling or heating media. It can be used on open top tanks and have all threaded connections above solution level.

Sanitary Drum Pump

Mallet & Company, Pittsburgh, has produced a new group of sanitary drum pumps to reduce excessive labor, time and cost when drums are emptied by hand. The new pump has a heavy duty electric control that will transfer such ingredients as jelly, corn syrup and other heavy food products up to 25 lb. per minute without waste or contamination. It is constructed of stainless-steel and aluminum and can be mounted on any 55-gal. drum. Pumps, it is claimed, are easily cleaned, as well as the transparent hose connections.

Air or electrically operated

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Count 5 average words per line. Rate 65 cents per line. Minimum charge $2.50. Cash with order, no discount allowed.
When answering "blind" advertisements address box and number shown care of

THE FOOD PACKER
139 N. Clark St., Chicago 2, Ill.

For Sale—Machinery & Equipment

FOR SALE: Fitzpatrick Comminuting Machines, Models D, F & K; (1) Niagara #110-20 Stainless Steel Filter 110 sq. ft.; (1) Hope type 18 semi-automatic stainless steel single piston filler; (50) Stainless Steel Tanks from 30 gal. to 10,500 gal. cap. (Some with mixers). (25) Aluminum Storage Tanks up to 3200 gal. cap. (30) Stainless Steel and Stainless Clad Steam Jacketed Kettles from 40 gal. to 500 gal. (Some with agitators). Lot of Welded Steel Tanks with Lastiglas and mammut lining (from closed breweries)—4300 gal. to 23,000 gal. sizes. 30 Wood tanks—4500 gal. to 14,000 gal. sizes.
PERRY EQUIPMENT CORP., 1405 N. 6th Street, Phila. 22, Pa.

USED and **REBUILT CANNING** and **FROZEN FOOD MACHINERY,** complete plant layout for greater efficiency from field to warehouse, stainless steel equipment made to order, list your surplus equipment with us. **OTTO W. CUYLER,** Webster, N. Y., since 1912.

CLOSE OUT SALE: CLOSING MACHINE, Canco 400 SF#12081 and auxiliary equipment, for #1 and 303 cans, $3000. CLOSING MACHINE Canco 400 SF and auxiliary equipment, 68235SF w/#1 and 303 change parts (like new) $5500. KNAPP LABELING MACHINES Type A Std. 1 to 46-oz. cans (2), each $900. CRCO SNIPPERS Model F Type L Motor driven with grading Tables and Motors (3 — 2 large and 1 med.) each $2000. CRCO BEAN GRADERS, 1 #3 Reel; 1 #6 Reel (like new, used one season); each $800. HOT WATER BLANCHER, 15' w/motor 3HP complete w/reel washer (2) each $900. CRCO PRE-GRADERS, Std. Frame, UG-A801 Feed Hopper and BGW-A251 Discharge Spout; all #4 Reels (5) each $400. FILLER & DRIVE Berlin-Chapman 10 valve, $300. All these items are in excellent condition. Also conveyors and miscellaneous items. Call or wire NASHUA FOODS, 102 North Birch, Pharr, Tex. Phone STerling 7-3273.

Help Wanted

SALESMEN: For canning machinery sales and customer contact work. Several openings available. Applicants with mechanical or chemical engineering degree and cannery experience preferred. Please send resume of education, experience, references, salary requirement and recent photo, if available, to: **Canning Machinery Division, FOOD MACHINERY & CHEMICAL CORP.,** Hoopeston, Ill. Attn, John R. Hughes, Personnel Mgr.

Choice Business Opportunities

BUYER BEWARE! DON'T MISS OUT! MUST POSITIVELY SELL BY APRIL 15, 1956.

Nashua Foods Company is selling out. Some of the mechanical equipment is already sold. Now the buildings and existing structures, along with the land they occupy, are being offered at a truly sacrifice price. This includes four air-conditioned insulated offices; processing room areas; warehouse space; roofed-over areas; and other existing structures. Over 27,000 square feet of concrete slab surface area. ALL FOR THE BARGAIN PRICE OF $35,000. The total land area consists of over 43,500 square feet.
The location: One block off Highway 83, in Pharr, Tex., in the heart of the Rio Grande Valley. 300 feet of railroad siding. Here is truly the bargain of this decade for anyone planning to establish a business in this famous MAGIC VALLEY.
This property is available immediately and will be sold to the first legitimate buyer. Contact O. John Sherman, STerling 7-3273, 102 North Birch, Pharr, Tex.

INVESTORS, INVESTIGATE NOW! THIS PROPERTY IS IN FINE CONDITION.

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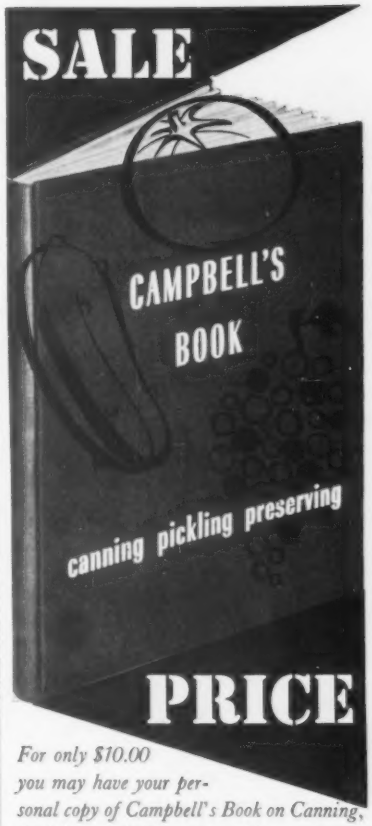

For only $10.00 you may have your personal copy of Campbell's Book on Canning, Pickling and Preserving. Have this one single complete source of processing know-how for your finger tip reference. No further computation needed! No other sources necessary.

Charts, tables and formulas are prepared to be taken directly into the quality control laboratory. Details are presented on the type of ingredients used, the quantity necessary for a given end volume and the necessary operations to make the combination of ingredients a high quality pack. This is the popular 1950 edition.

NOW

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Order your copy today.

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139 N. Clark, Chicago 2, Ill:

Please send _____ copies at $10.00 each.

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Man-Of-The-Month

F. Gilbert Lamb
President
Lamb-Weston, Inc.

The phrase "busy man" is in common usage in this age of "fire engine" industry. However, it could not be improved upon to describe F. Gilbert (Gib) Lamb, president of Lamb-Weston, Incorporated, Weston, Ore., and newly elected president of the National Association of Frozen Food Packers. Close friends point out that Gib Lamb has been busy since the day he started school – he was "just that type of lad." He is a serious-minded, alert young man, with a curiosity that permits him to learn quickly and keeps his field of interest on a wide-spread plane. His ability to learn and grasp new ideas in a short time enables him to spread his talents into many fields. This is attested to by the fact that he holds the chairmanship of his local Methodist Church; is a member of the board of directors of the Oregon Council of Churches; a precinct committeeman for the Republican party; a member of the executive board of the Oregon Republican club; a Rotarian for 21 years and past-president of his local group; national council member of the Boy Scouts of America; and on the board of directors of Federal Union, Incorporated.

Starts Career

Mr. Lamb was born September 17, 1915. He is married and the father of four children, ranging in age from 5 to 15. The most eventful occasion in his life dates back to 1934 when, at the age of 19, he took over his father's business upon the latter's death. This early assumption of heavy business responsibility prevented him from continuing his education beyond high school. Today at 40, Gib Lamb has been the manager of a successful and growing business for over half his life.

Enters Freezing Field

According to Mr. Lamb, progress was slow for the first 10 years after he accepted the challenge of his father's business – a small ($4,000) fresh fruit shipping operation. In 1939 he entered into the frozen food business because his firm was leasing an apple cold storage warehouse and most of the apples in the area were being "pulled out." The company's first product was frozen barrelled strawberries, since that commodity lent itself to the Lamb operational scheme.

After this start the company installed its first freezing tunnel (1942) in the Blue Mountain area and froze a small pack of peas. Since that time it has been a matter of spending next year's profits to buy equipment this year in order to do a better job next year. This policy bears out the type of man who heads the thriving company which originally started in the fresh fruit field.

Catastrophe struck in 1949, just as the concern was getting up a "head of steam." Fire broke out and destroyed the processing plant at Milton-Freewater, Ore. After considerable thought, plans for rebuilding in that location were abandoned. Instead, the company acquired the former plant of the Eastern Oregon Canning Company at Weston, Ore. In recalling this decision, the company's youthful president explained, "The new facilities are better adapted to packing Shelled-at-the-Plant (company's slogan) peas."

Multiple Operation

At this time Lamb-Weston, Incorporated, was organized to operate the Weston plant. Other companies have been formed to facilitate management and ease of operation. Because Gib Lamb and his brothers, Reese and Paul, who are in the business with him, are not men to sit idly by while the world moves around them, there are now three companies controlled and operated by the Lamb family, headed by older brother Gil. F. G. Lamb & Company confines itself to operating cold storage plants at Milton-Freewater and Weston, Ore. Another company, Weston Cattle Company, further exemplifies the ingenuity and progressive thinking of young Mr. Lamb. This organization was formed in 1953 for the purpose of providing about 1,000 head of cattle to utilize the feed from 240 acres of irrigated pasture, which is used to carry off waste water disposal, and to aid in eating some 20,000 tons of pea vine silage accruing from the Shelled-At-The-Plant pea operation.

Growth of operation is still additional proof of the far-thinking character of the company's 40-year old president. The Weston plant now has freezing equipment and a 500,000-cu. ft. storage area. It has a daily freezing capacity of over 300 tons. From the small start which included only strawberries and peas, the company has branched out in products processed until now it also packs lima beans, carrots (these two also are mixed as a single product), mixed vegetables and succotash.

Most packing is done for chain store labels, but the company's Flav-R-Pack brand (packed in affiliation with members of the North Pacific Canners & Packers, Incorporated) enjoys wide distribution.

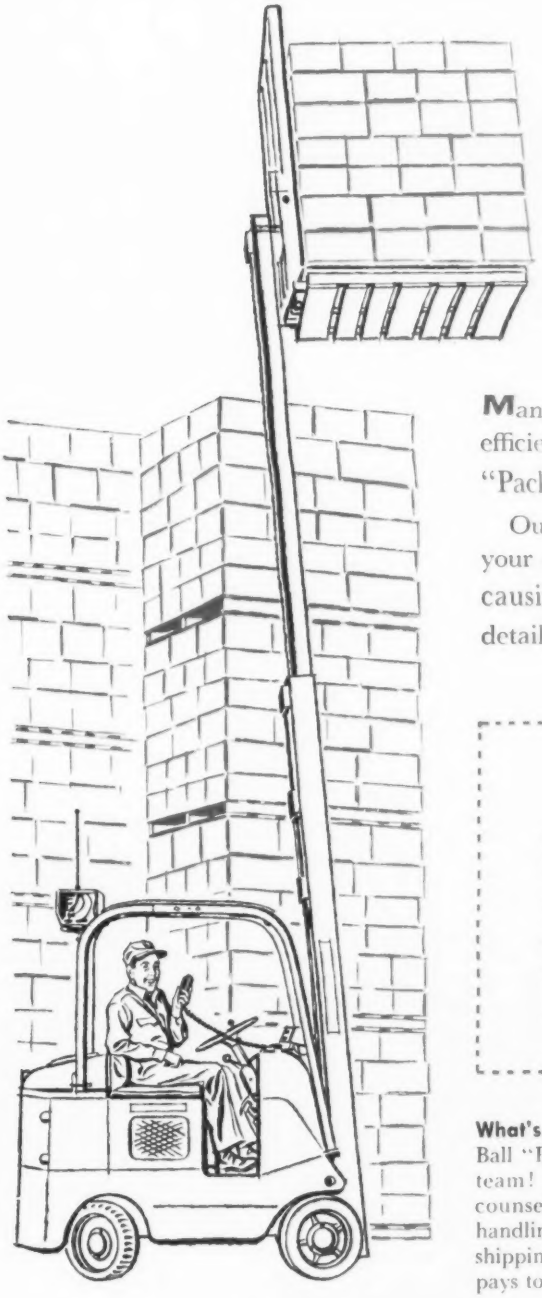
His business acumen and production sense have gained the attention of the food freezing industry, as have his leadership qualities which led to his recent election as president of the nation's food freezers. His youthful appearance and straight-forward manner have won for him many friends, not only in his chosen field but in allied fields as well.

Bright Future

Friends and close associates of Gib Lamb predict great things for him in the future. His progressive ideas and his instinct to do the right thing at the right time will, they claim, aid tremendously in the immediate future to form and mold an organization of food freezers equal to that of any like organization in existence. A close friend of his recently declared that, "Gib is just what a young industry needs. It is like a young father growing up with his sons. Each understands the other more fully and recognizes the same problems in the same light."

Despite his heavy business schedule and varied outside activities he is still able to devote time to two hobbies – hunting and fishing. 'Tis said he excels at both with the eye of a Davy Crockett down a gun barrel and an enviable knack for dropping the right bait at the right time in the right place.

CALL *Ball* and GET MORE THAN GLASS!



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can help you
cut costs . . . increase profits!

Many firms have cut costs, increased profits, by more efficient materials handling methods. That's where Ball "Packaging *Plus*" Service can be of real help to you.

Our technical staff includes experts qualified to analyze your complete operation. If an unsuspected condition is causing needless expense, as is often the case, their detailed report will offer a suggested remedy.

A CASE HISTORY

● One midwest food packer *thought* he carried only a 9-day supply of empty jars; yet he was crowded for storage. A Ball materials handling specialist found up to a 90-day inventory on some containers. Recommendation: daily deliveries, shipments going direct from trucks to filling lines; 2-day emergency reserve. Ball Radio-Controlled Shipping Center made this feasible. Result: estimated annual saving of $22,000.

What's *Your* "Hidden" Problem? Enlist Ball "Packaging *Plus*" Service on your team! Inquire about our specialized counsel covering not only materials handling, but also processing and filling, shipping cartons, container design. It pays to call BALL first of all!

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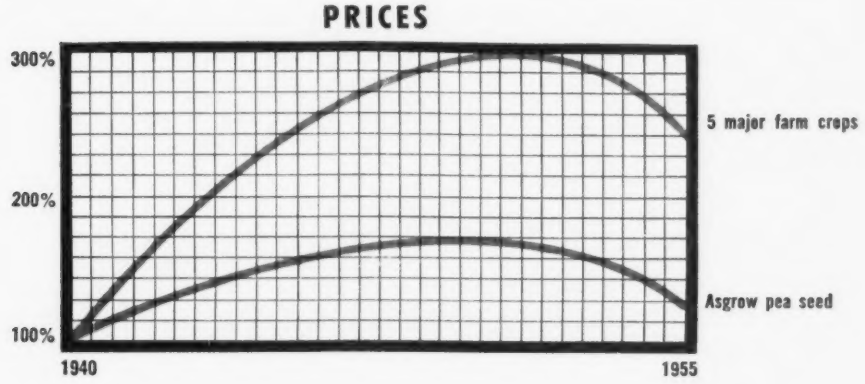

WHAT'S BEHIND THE BARGAIN IN PEA SEED

Here's the Background

About ten years ago we at Asgrow began overhauling every phase of our business to develop a more modern organization equipped to serve the increasingly exacting requirements of the food-packing industry. Here are some of the highlights of that program:

1. *Breeding and Research.* Personnel and facilities have been added. The Asgrow Research Center was established at Twin Falls, Idaho to coordinate our program of plant breeding, trials, and pilot-plant testing of new varieties.

2. *Quality Control and Production Research.* Also at the Asgrow Research Center another team of specialists has been conducting careful studies of cultural and processing methods to improve the yield and quality of Asgrow seed crops.

3. *Production and Warehousing.* Seed-growing areas have been carefully evaluated and new areas have been developed. New warehouse facilities have been built to handle crops far more efficiently with new automatic machinery.

Here's the Result!

This Asgrow program of modernization is now paying off—for us and for you—in money-saving efficiency and in better quality seed. We are now furnishing higher quality seed at lower prices, relative to the rest of the economy, than at any time in our one-hundred-year history, and for those packers who book future contracts, we offer an even greater advantage in price.

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